



**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

CENTER FOR BIOLOGICAL DIVERSITY,
et al.,

Plaintiffs,

v.

Case No. 1:19-cv-02085 KBJ

McALEENAN, *et al.*,

Defendants.

DECLARATION OF PAUL ENRIQUEZ

I, Paul Enriquez, declare as follows:

1. I am the Acquisitions, Real Estate and Environmental Director for the Border Wall Program Management Office (“Wall PMO”), U.S. Border Patrol Program Management Office Directorate, U.S. Customs and Border Protection (“CBP”), an agency of the Department of Homeland Security (“DHS”). I have held this position since August 6, 2018. From 2013 to August 2018, I was the Real Estate and Environmental Branch Chief for the Border Patrol and Air and Marine Program Management Office (“BPAM”), Facilities Management and Engineering, Office of Facilities and Asset Management (“OFAM”). From 2011 to 2013, I was employed as an Environmental Protection Specialist in the BPAM office. In that role, I performed environmental analyses for various border infrastructure projects. From 2008 to 2011, I was a contractor assigned to the BPAM office and provided environmental support on various border infrastructure projects. Based upon my current and past job duties, I am familiar

with past and planned border infrastructure projects that have been executed in support of border security.

2. In my position I am personally aware of the border barrier projects in Arizona that will be executed under the waiver issued by the Secretary of DHS pursuant to Section 102(c) of the Illegal Immigration Reform and Immigrant Responsibility Act (“IIRIRA”) that was published in the Federal Register on May 15, 2019, 84 Fed. Reg. 21798 (the “Arizona Waiver”). The projects will be executed with the assistance of the Department of Defense (“DoD”).

3. This declaration is based on the best of my current knowledge and information made available to me in the course of my official duties.

BACKGROUND

4. The Secretary of DHS has determined that the United States Border Patrol Tucson Sector (the “Tucson Sector”) is an area of high illegal entry. Consequently, Section 102 of IIRIRA requires DHS to construct physical barriers and roads to deter and prevent illegal entry of people and drugs into the United States.

5. To support DHS’ action under Section 102 of IIRIRA, in February 2019, the Secretary of DHS requested that the Secretary of Defense, pursuant to 10 U.S.C. § 284(b)(7), assist by constructing fences, roads, and lighting in various locations, including projects within the Tucson Sector designated Tucson Sector Projects 1, 2, and 3 (the “Arizona Projects”).

6. In May 2019, the Acting Secretary of Defense concluded that the support requested for the Arizona Projects satisfies the statutory requirements of 10 U.S.C. § 284(b)(7) and that DoD will provide such support for those projects.

7. CBP is the DHS component with primary responsibility for border security. Therefore, CBP constructs, operates, and maintains border infrastructure necessary to deter and prevent illegal entry on the southern border.

8. Within CBP, the Wall PMO has expertise in managing and executing border infrastructure projects. The Wall PMO is directly tasked with managing the schedule, finances, real estate acquisition, environmental planning—including compliance with the National Environmental Policy Act (“NEPA”) and the Endangered Species Act (“ESA”—and construction of the border infrastructure system along the U.S. border. Given its expertise in managing border infrastructure projects, the Wall PMO, on behalf of CBP, is working in close coordination with DoD on the Arizona Projects.

9. For the Arizona Projects, the Wall PMO, on behalf of CBP has and will, among other things, review and approve technical specifications, review and approve barrier alignments and locations, and provide feedback and input on other aspects of project planning and execution. In addition, the Wall PMO, on behalf of CBP, is responsible for all environmental planning, including stakeholder outreach and consultation, for the Arizona Projects.

10. In my capacity as the Acquisitions, Real Estate and Environmental Director, I am responsible for overseeing all environmental planning and compliance activities as well as the real estate acquisition process for projects executed or overseen by the Border Wall PMO, including the Arizona Projects.

11. The Arizona Projects to be carried out under the Arizona Waiver will be executed along four separate segments of the international border that are described in the Arizona Waiver (the “Arizona Project Areas”). Tucson Projects 1 and 2 together make up the first segment. See Exhibit 1. Tucson Project 3 consists of three smaller segments. See Exhibit 2.

12. Plaintiffs’ motion for a preliminary injunction places the following projects at issue:

- Tucson Project 1, which involves replacement of approximately 38.6 miles of vehicle barrier with pedestrian barrier on the eastern portion of the Cabeza Prieta National Wildlife Refuge (“CPNWR”) and on the Organ Pipe Cactus National Monument (“OPCNM”).
- Tucson Project 2, which involves replacement of approximately 5.1 miles of outmoded pedestrian barrier around the Lukeville Port of Entry within the OPCNM.
- One segment of Tucson Project 3, which involves construction of a bridge and related border infrastructure across the San Pedro River along the southern border of the San Pedro Riparian National Conservation Area (“SPRNCA”). The San Pedro Project Area is described in the Arizona Waiver as starting at Border Monument 98 and extending east to Border Monument 97. Within that described project area, the barrier footprint is approximately 0.3 miles that spans the San Pedro River.

For ease of reference, the areas encompassed by Tucson Projects 1, 2, and the San Pedro Project are collectively referred to as the “Challenged Project Areas.”

13. Collectively, the project area for Tucson Projects 1 and 2 is described in the Arizona Waiver as starting approximately one-half (.5) mile west of Border Monument 178 and extending east to Border Monument 162. Within that described project area, the barrier footprint will start on the Pima and Yuma County line on the CPNWR and extend east to approximately 1.6 miles west of eastern boundary of the OPCNM near Border Monument 163. See Exhibit 1.

14. Tucson Project 3, in addition to the segment described above, includes two additional segments of the international border in Cochise County, Arizona, which are not at

issue in plaintiffs' motion for a preliminary injunction—a 0.2 mile section along Coronado National Monument and a 19.2 mile section between Boundary Monuments 74 and 83, a portion of which adjoins the San Bernadino National Wildlife Refuge. See Exhibit 2.

15. Within the Arizona Project Areas approximately 63 miles of existing vehicle barrier and outmoded pedestrian barrier will be replaced with new bollard wall. Of the approximately 63 miles of existing barrier that is to be replaced as a part of the Arizona Projects, approximately 43.7 of those miles are within the Tucson 1 and 2 Project Areas and approximately 0.3 of those miles are within the San Pedro Project Area.

16. DoD made contract awards for the Arizona Projects on May 15, 2019. Environmental planning and consultation for the Arizona Projects was initiated on May 6, 2019. The environmental planning and consultation that CBP has and will engage for the Challenged Projects described in more detail in Paragraphs 19 through 35 below.

17. The existing vehicle barrier and outmoded pedestrian barrier within the Challenged Project Areas no longer meet Border Patrol's operational needs. They will be replaced with new bollard wall that will be 30-feet tall and includes a linear ground detection system. The bollards are steel-filled concrete that are approximately six inches in diameter and spaced, in most instances, approximately four inches apart. No new roads will be constructed as a part of the Challenged Projects. However, there will be some improvements to existing roads. Lighting will be installed that will be supported by grid power and may include imbedded cameras. All of the construction activity will occur on land that is owned and controlled by the United States that is the vicinity of the border. The majority of the construction activity and project footprints themselves will occur within a 60-foot strip of land that parallels the international border that is previously-disturbed, includes existing barriers and roads, and

functions primarily as a law enforcement zone. There will be certain staging areas for construction vehicles and materials that will be outside the 60-foot area adjoining the border.

18. It is my understanding, based on information provided by DoD today, that initial construction on the Tucson Project 2 is scheduled to begin on August 19, 2019. The initial construction will involve the removal of existing pedestrian fence and installation of approximately two (2) miles of bollard wall. Installation of the bollard panels is scheduled to begin on August 22, 2019. Work will begin on the eastern end of the Tucson 2 Project Area and move west toward Lukeville. Construction of the initial two (2) miles will take approximately 45 days. For the remaining portions of Tucson Projects 1 and 2, the final barrier designs are not yet complete. Similarly, the designs for the proposed barrier in the San Pedro Project Area have also not been finalized. There will be geotechnical surveys in and around the riverbed in mid-to-late September, which will be prerequisite to finalization of the designs. Given the remaining design work that is left to be done, DoD expects to conduct no other removal of existing barriers or construction of bollard wall in the Challenged Project Areas before October 1, 2019. DoD's contracts for the Challenged Projects have an estimated completion date of January 2021.

ENVIRONMENTAL PLANNING AND CONSULTATION

19. CBP has long had a border security presence in the Arizona Project Areas and their surrounding areas. Through the planning and development of past projects and activities, CBP has developed a deep understanding and awareness of the natural, biological, historic, and cultural resources in the Arizona Project Areas.

20. To cite just a few examples of CBP's prior environmental analyses covering actions in and near the Challenged Project Areas, in 2003 CBP completed a Supplemental Environmental Assessment concerning the installation of border infrastructure in the Naco-Douglas Corridor, which included an analysis of potential impacts from the installation of border

infrastructure within the San Pedro Project Area. In 2008 CBP completed an Environmental Assessment (EA) concerning the installation, operation, and maintenance of approximately five miles of pedestrian barrier around the Lukeville Port of Entry, which corresponds to the Tucson 2 Project Area. The 2008 Lukeville EA is attached hereto as Exhibit 5. In 2008, CBP also completed an Environmental Stewardship Plan (ESP) concerning the construction, operation, and maintenance of approximately six miles of pedestrian and vehicle barrier in the San Pedro Project Area and its surrounding area. In 2013, CBP completed an EA for the maintenance and repair of border infrastructure throughout the State of Arizona. The 2013 EA was the culmination of years of analysis and consultation with stakeholders concerning the potential environmental impacts from CBP's repair and maintenance of existing and proposed border infrastructure in Arizona, including infrastructure in the Arizona and Challenged Project Areas.

21. CBP is drawing on its prior experience in the Arizona Project Areas as it assesses the potential environmental impacts of the Arizona Projects, including the Challenged Projects.

22. In addition, CBP is presently engaged in environmental planning and consultation that is specifically targeted to the Arizona Projects, including the Challenged Projects. As a part of its environmental planning process, CBP conducts biological, cultural, and other natural resource surveys, coordinates with stakeholders, and uses that information to inform project planning and execution.

23. On May 6, 2019, before the Arizona Waiver was issued, to better understand the potential impacts of the Arizona Projects, CBP sent consultation letters to 100 stakeholders and potentially interested parties, including, among others, the United States Fish and Wildlife Service (“USFWS”), the Bureau of Land Management (“BLM”), the National Park Service (“NPS”), the U.S. Environmental Protection (USEPA), the Arizona State Historic Preservation

Officer, the Arizona Department of Environmental Quality, the Arizona Game and Fish Department, State and local officials, Native American Tribes, and numerous non-governmental organizations. The consultation letters included information about the Arizona Projects and invited input from stakeholders regarding potential impacts. They also informed stakeholders that CBP would be accepting comments and input through July 5, 2019, regarding the Arizona Projects.

24. Also on May 6, 2019, CBP posted notices on its website, CBP.gov, notifying the public of the Arizona Projects and soliciting the public's input regarding potential impacts. The notices posted on CBP's website can be found at <https://www.cbp.gov/document/environmental-assessments/pima-and-cochise-counties-border-infrastructure-projects-may-2019>. The notices included a link to the same consultation letters that were sent to every individual stakeholder or potentially interested party.

25. On May 15 and 16, 2019, CBP conducted on-site meetings with representatives from Department of Interior ("DOI"), USFWS, NPS, USEPA, BLM, the United States International Boundary and Water Commission ("IBWC"), the United States Forest Service, and the Tohono O'odham Nation. At the on-site meetings, the parties toured the Arizona Project Areas, including the Challenged Project Areas, and discussed the potential impacts of the projects.

26. On May 25, 2019, the Public Lands Liaison for the Tucson Sector met with members of certain non-government organizations, including the Sierra Club, the Center for Biological Diversity, the Nature Conservancy, and the Friends of the Sonoran Desert to discuss a number of topics related to the intersection of border security and conservation of lands on the

southwest border. Among the topics discussed were the Arizona Projects, including the Challenged Projects.

27. On May 30, 2019, CBP participated in a regular meeting of the Border Management Task Force. This task force meets every month to discuss issues related to border security and federal land management. Its members include federal land managers, CBP representatives, and Congressional staff. At the May 30th task force meeting, the attendees discussed the Arizona Projects, including the Challenged Projects.

28. Since the close of the formal comment period, CBP has continued with its consultation. For example, on July 24, 2019, CBP held an in-person meeting with a group of local landowners and representatives from the ranching community to discuss the Arizona Projects, including the Challenged Projects, and solicit input on potential impacts. As a follow-up to the meeting, the local landowners and representatives from the ranching community sent CBP detailed information concerning washes within Arizona Project Areas and design suggestions to minimize potential impacts to such washes and the risk of flooding.

29. In addition, CBP continues to engage with federal land managers and resource agencies, including NPS, BLM, and USFWS, that manage the CPNWR, OPCNM, and SPRNCA and the resources that are found within those areas. For example, CBP has had discussions with NPS, which manages the OPCNM, and the construction contractor for the Challenged Projects concerning potential impacts to Quitobaquito Springs, which lies approximately 13 miles west of the Lukeville Port of Entry and approximately .25 miles north of the Tucson 2 Project Area. See Exhibit 3. At the request of NPS, the contractor agreed that it will not drill wells within five (5) miles of either side of Quitobaquito Spring in order to minimize the risk of hydrological impacts to the Quitobaquito Spring. CBP is also planning to have biological monitors in place during

construction to minimize the risk of construction impacts to the Sonoyta mud turtle and other species and to monitor water levels of Quitobaquito Springs during construction to gauge for possible hydrological impacts. In an effort to minimize or avoid impacts to other resources in the OPCNM, CBP and DoD have also been working directly with NPS to identify both the roads that may be used as access routes and the roads that may not be used for the Challenged Projects.

30. CBP intends to provide the federal land management and resource agencies that oversee and administer the CPNWR, OPCNM, and SPRNCA and the resources therein the opportunity to review both the alignment and design of the Challenged Projects and to propose design changes that could minimize potential environmental impacts. Where the proposed design changes are feasible, CBP will recommend such changes to DoD for incorporation into project execution. In addition, CBP has and will continue to review the Challenged Projects to assess whether there are design modifications or other measures that it can recommended to DOD to minimize or avoid potential environmental impacts.

31. Consistent with its past practice for prior border infrastructure projects, CBP has surveyed the Arizona Project Areas, including the Challenged Project Areas, for biological, historical, and cultural resources, and jurisdictional “Waters of the United States.” CBP has and will continue to use the data and information obtained through the surveys, along with data and information drawn from past environmental surveys and planning that CBP has done in the Arizona Project Areas, to prepare biological and cultural resources reports.

32. All of the information and input CBP obtains through stakeholder consultations, the biological and cultural resources reports, and prior environmental planning informs project planning and execution of the Challenged Projects. For example, using the information it has compiled and feedback it has received, CBP will prepare an analysis of the potential

environmental impacts of the Challenged Projects. CBP is also planning to do a post-construction assessment of impacts.

33. Using the information that has been compiled to date, CBP has already identified construction Best Management Practices (“BMPs”) that were presented to DoD for incorporation into project planning and execution in order to minimize or avoid potential impacts to the greatest extent practicable. These BMPs include, among other things, a requirement that the contractor develop a storm water pollution prevention plan, an environmental awareness briefing for the construction contractor prior to any ground disturbing activities, pre-construction bird surveys, a stop work requirement if federally-listed species or archeological resources are discovered or are present within a work area, measures to limit the clearing of vegetation wherever possible, and measures to prevent the introduction of invasive species and minimize noise impacts. A complete list of the BMPs that have already been incorporated into the Challenged Projects is attached hereto as Exhibit 6. As noted above, CBP will continue to assess the Challenged Projects for additional BMPs, design modifications, or other measures that can be taken to minimize or avoid impacts.

34. CBP also plans to have biological and archeological monitors on site during construction to ensure compliance with the BMPs and to assist with any environmental or cultural issues that may arise. In addition, I understand that DoD also has assigned biologists to assist with oversight of the construction being conducted pursuant to 10 U.S.C. § 284(b)(7) who will make site visits to the Challenged Project Areas and assist with issues that may arise.

35. In addition to developing BMPs, the input from stakeholders and CBP’s own analysis will be used to develop mitigation measures, which may be implemented during or after construction to offset or minimize unavoidable impacts. For example, for past border barrier

projects, CBP has worked directly with DOI to implement mitigation measures such as revegetation of project areas and the creation of new habitat for endangered fairy shrimp. There will be similar measures taken for the Challenged Projects. For example, CBP and DoD have already committed to restoring areas outside the 60-foot area immediately adjacent to the border that are impacted by construction activities. In addition, CBP and DoD will require that the construction contractor protect in place any saguaro or organ pipe cactuses and agave plants found within the Challenged Project Areas and relocate cactuses and agave that cannot be protected in place. Exhibit 6 § 1.13.5.3.d.; § 1.13.5.4.

ENVIRONMENTAL HARMS ALLEGED BY PLAINTIFFS

36. Based on CBP's prior experience in the Challenged Project Areas, meetings with various resource experts, and my understanding of the Challenged Projects, I find a number of plaintiffs' claims concerning the alleged environmental harms that will result from projects that will occur in the Challenged Project Areas to be overstated or misplaced.

A. Alleged Procedural Injuries

37. Plaintiffs allege that the Arizona Waiver results in procedural harms or injury. Plaintiffs allege, for instance, that there will be "no public input" or that plants and animals "that we may not even be aware of" will be harmed or lost because no environmental analysis will be conducted. (Misztal Decl. ¶ 17.)

38. Plaintiffs' allegations that the Challenged Projects will proceed without an environmental review or opportunity for public comment is not correct. As detailed above, using CBP's own data and information, new resource survey data, as well as the input provided by federal and state resource agencies, CBP has and will continue to consider and assess the potential environmental impacts of the Challenged Projects. Also as detailed above, through its consultation letters and other outreach, CBP has specifically sought input from numerous parties,

including USFWS, State and local officials, local landowners, non-governmental organizations, and the public. Therefore, a wide range of stakeholders and interested parties, including plaintiffs, have had the opportunity to raise concerns and provide input about the potential environmental impacts of Challenged Projects. CBP will consider that input as it plans and executes the Challenged Projects in coordination with DoD.

39. CBP has shown on past projects that it strives to be responsive to concerns or input provided to CBP as a part of its consultation processes. The same is true for the Challenged Projects. For example, as noted above, in addition to the consultation that has already taken place between CBP and the federal land managers and resource agencies that administer and oversee the CPNWR, OPCNM, and SPRNCA, CBP will provide these federal land managers and resource agencies the opportunity to review both the alignment and design of the Challenged Projects and to propose design changes that could minimize potential environmental impacts.

B. Alleged Environmental Harms

40. In addition to alleged procedural injuries, plaintiffs make a number of allegations regarding purported environmental harms that they claim will result from the Challenged Projects, including impacts to federally-listed species, wildlife, other natural resources, and plaintiffs' recreational or aesthetic interests. As detailed below, I find a number of the plaintiffs' claims to be overstated or misplaced.

1. Federally-Listed Species

41. Plaintiffs state that they are concerned that the Challenged Projects will harm the endangered Sonoran pronghorn. (Flesch Decl. ¶ 15.) Plaintiffs allege, for example, that the Challenged Projects will create an impermeable barrier to the movement of the species into

Mexico, which will decrease the genetic diversity necessary for recovery and survival. (Jordahl Decl. ¶ 21.)

42. Evidence does not support plaintiffs' suggestion that the Challenged Projects will threaten the survival of Sonoran pronghorn. According to the 2016 Recovery Plan for Sonoran pronghorn, recovery of the Sonoran pronghorn does not depend on natural cross-border migration of the species. Although the Recovery Plan considers the Sonoran pronghorn throughout its range, it specifically designates two conservation units containing two separate populations of the species: one in the United States and one in Mexico. *United States Fish and Wildlife Service, Recovery Plan for the Sonoran Pronghorn, Second Revision* (November 2016) at 91, available at

https://www.fws.gov/southwest/es/arizona/Documents/SpeciesDocs/SonoranPronghorn/FINAL_Sonoran_Pronghorn_Recovery%20Plan_2nd%20Revision_11-16-16.pdf. USFWS has noted that the species would likely benefit from habitat connectivity between Sonoran pronghorn populations. *Id.* at 30. However, the Recovery Plan makes clear that recovery of Sonoran pronghorn does not depend on such natural cross-border migration, as Sonoran pronghorn in the United States are already "effectively geographically separated from Sonoran pronghorn populations in Mexico due to the physical barriers of Mexican Highway 2 and associated fencing." *Id.* at 2. In addition, the Recovery Plan states that having viable populations in both the United States and Mexico serves the aims of "representation, redundancy, and resiliency across its range," which decreases the chances that a "single stochastic event would cause the entire subspecies to go extinct." *Id.* at 99. Importantly, the Challenged Projects will not eliminate whatever opportunity for natural cross-border migration currently exists.

43. The Recovery Plan states that “within population habitat connectivity,” unlike cross-border migration, is critical to recovery. Importantly, then, the Challenged Projects will not affect vast areas of habitat that are currently available to the Sonoran pronghorn in Arizona. As noted above, in general the construction activity and project footprints of the Challenged Projects will be within a 60-foot strip of land that parallels the border and already functions as a law enforcement zone. By contrast, the areas that surround the Challenged Project Areas include vast swaths of federally-protected lands, including the OPCNM and the CPNWR. The OPCNM is 330,689 square acres or 516 square miles. The CPNWR is 803,418 acres or over 1200 square miles. The Challenged Projects will impact only a tiny fraction of these areas and the habitat Sonoran pronghorn occupy or utilize therein will not be significantly impacted.

44. In fact, since 2001, despite an increased presence of cross-border violators and the corresponding Border Patrol response (including the construction of border infrastructure), the population of endangered Sonoran pronghorn in Arizona has increased significantly, from approximately 21 in 2001 to over 200 by 2014. *Id.* at 14. In my discussions with USFWS concerning the Challenged Projects, USFWS has informed me that the population continues to increase. According to USFWS, the 2018 estimate for endangered Sonoran pronghorn in Arizona rose to 215. In addition, USFWS has established and manages a non-essential experimental population of Sonoran pronghorn in Arizona pursuant to section 10j of ESA. USFWS has informed me that the 2018 population estimate for the non-essential experimental population of Sonoran pronghorn in Arizona is approximately 121.

45. Plaintiffs also allege that the San Pedro Project could harm the endangered Huachuca water umbel, which occurs in the San Pedro River. (Misztal Decl. ¶ 6; Stromberg Decl. ¶ 7.) However, there is no designated critical habitat for Huachuca water umbel in the San

Pedro Project Area. *Final Rule, Designation of Critical Habitat for the Huachuca water umbel*, 64 Fed. Reg. 3741 (July 12, 1999), available at <https://www.govinfo.gov/content/pkg/FR-1999-07-12/html/99-17403.htm>. USFWS defines critical habitat as those areas that contain the physical and biological features essential to the conservation of a species, 50 C.F.R. § 424.12(b), and it is generally limited to those areas that are either occupied by the species or those areas outside the geographic area occupied by the species that are essential to the conservation of the species. *Id.*

46. The nearest designated critical habitat for Huachuca water umbel is approximately seven miles (7) north of the San Pedro Project Area. *Id.* at 3753. According to USFWS, currently the nearest known occurrence of the Huachuca water umbel is over 10 miles north of the San Pedro Project Area. As a part of CBP's coordination with USFWS concerning the Challenged Projects, USFWS informed me that it is not aware of any individual Huachuca water umbel occurring within the San Pedro Project Area. Further, USFWS has stated that so long as there will be mechanisms in place to allow stream flows through grates or under bridges, USFWS does not expect the San Pedro Project to result in population-level impacts to Huachuca water umbel. The barrier designs for the portion that will span the San Pedro River is not yet complete. However, there is no question that the final design will allow for continued flow of the San Pedro River.

47. Plaintiffs assert that the Challenged Projects may "contribute to the ultimate extinction of the Sonoyta mud turtle, a species that is found in and around Quitobaquito Springs. (Silver Decl. ¶ 7.) Plaintiffs state that they are concerned about the potential construction impacts, noting that construction activity may damage critical habitat or destroy nests and nesting females, and discourage nesting and other terrestrial activity. (Rosen Decl. ¶ 8.)

Plaintiffs also cite the “presumptive” increase in traffic associated with the potential upgrade of the existing roads, which, plaintiffs assert, “may subject terrestrially active turtles to roadkill mortality.” (Rosen Decl. ¶ 11.)

48. Plaintiffs’ assertions concerning potential construction impacts are overstated. CBP intends to have biological monitors in place throughout construction who will observe the construction footprint for a range of biological resources, including Sonoyta mud turtles. Among the BMPs for the Challenged Projects is a requirement that construction activities cease if a federally-listed species is found within the project limits. Exhibit 6 § 1.12.2.g. Work may only resume after a Government biologist has removed the individual federally-listed species or it moves away on its own. *Id.* Regarding plaintiffs’ concerns about damage to critical habitat, the BMPs also require that, where work is occurring in habitat for federally-listed species, the removal of vegetation is limited to the smallest amount needed to meet the contract requirements. *Id.* at 1.12.2.f. Finally, plaintiffs do not have an adequate basis to make assertions about a “presumptive” increase in vehicular traffic after construction is complete. The Challenged Projects are construction projects. None of them contemplate the hiring of additional Border Patrol agents or deploying additional agents to patrol within the Challenged Project Areas.

49. In addition, plaintiffs’ allegations that the proposed barrier could potentially reduce cross-border movement of the Sonoyta mud turtle are speculative and qualified. (Rosen Decl. ¶¶ 14-15 (not claiming that the bollard fencing here will prevent all turtle movement and admitting only that the fencing “would potentially” cause harm.) In addition, USFWS has found that “[e]xchange of genetic material between Quitobaquito Springs and populations along the Rio Sonoyta [in Mexico] is unlikely due to complete lack of hydrological connection and has not

been observed despite some mark-recapture effort at these sites (Paredes-Aguilar and Rosen 2003, p. 9).” *United States Fish and Wildlife Service, Species Status Assessment Report for the Sonoyta Mud Turtle, Version 2.0*, at 24 (August 2017).

50. It should be noted that in CBP’s conversations with USFWS regarding potential impacts to Sonoyta mud turtle from the Challenged Projects, USFWS’ greatest concern is the continued hydrological integrity of Quitobaquito Springs. The same is true regarding potential impacts to the Quitobaquito pupfish, another species plaintiffs assert will be harmed by the Challenged Projects. (Jordahl Decl. ¶ 18.) However, as discussed in more detail in Paragraph 61 below, it is unlikely that the Challenged Projects will result in hydrological impacts to Quitobaquito Springs. As noted, in order to minimize the potential for hydrological impacts, the construction contractor for the Challenged Projects has agreed not to drill wells within five (5) miles of either side of Quitobaquito Springs. No blasting will be required for the Challenged Projects, and the trenching for the footer of the barrier will only go to a depth of seven (7) feet, meaning it is unlikely that such trenching will have any impact on groundwater that may have a hydrological connection to Quitobaquito Springs.

2. Other Wildlife

51. Plaintiffs also claim that the Challenged Projects threaten other, non-listed wildlife species. For example, plaintiffs allege that the “[i]f the border wall is constructed, the U.S. population of [the cactus ferruginous pygmy-owl] will be separated from the more numerous Mexican population, and its continued presence in the U.S. ‘will have to rely on captive breeding or facilitated dispersal.’” Pls. Mem. at 35-36, n.6, citing Flesch Decl. ¶¶ 13-14. As an initial matter, plaintiffs incorrectly assert that the pygmy-owl was removed from the list of endangered or threatened species “due to a data error.” Pls. Mem. at n. 29. Rather, USFWS determined on remand in 2006 that pygmy owls in Arizona did not qualify as a distinct

population segment (“DPS”) of the species that could be listed under the ESA because they were not significant to the species as a whole. *United States Fish and Wildlife Service, Final Rule to Remove the Arizona Distinct Population Segment of the Cactus Ferruginous Pygmy-owl (Glaucidium brasilianum cactorum) From the Federal List of Endangered and Threatened Wildlife*, 71 Fed. Reg. 19,452 (April 14, 2006). Consistent with that delisting decision, USFWS later determined that pygmy owls in the Sonoran Desert, including in Arizona, were not sufficiently important to the conservation of the species to qualify as a significant portion of the range (“SPR”) of the species. *United States Fish and Wildlife Service, 12-Month Finding on a Petition To List the Cactus Ferruginous Pygmy-Owl as Threatened or Endangered With Critical Habitat*, 76 Fed. Reg. 61,856, 61,889-893 (Oct. 5, 2011). More fundamentally, plaintiffs focus on alleged impacts to pygmy owls in Arizona and have not alleged or shown that population-level impacts to the species as a whole, *i.e.*, throughout the U.S. and Mexico, are likely to occur from the proposed border barrier at issue in their motion. As USFWS noted in its 2011 determination for the pygmy owl, the species is “common” and far more numerous in other portions of its range in Mexico, 76 Fed. Reg. at 61,892. In any event, plaintiffs’ suggestion that the small Arizona portion of the species will be “separated” from the Mexican portion is incorrect. The range of the pygmy owl in Arizona extends well to the east of the Tucson 1 and 2 Project Area at issue plaintiffs’ motion, and includes substantial areas along the border where vehicular barrier remains, including in the Tohono O’odham Nation. See Exhibit 4; <https://ecos.fws.gov/ecp0/profile/speciesProfile.action?spcode=B08N>.

52. Plaintiffs also claim that “innumerable” large and medium-size mammals will be affected (Jacobs Decl. ¶ 7), as the Challenged Projects could prevent the cross-border migrations

of species such as mule deer, javelina, bobcats, bighorn sheep, mountain lions, and black bears.¹

(E.g., Flesch Decl. ¶ 15; Jordahl Decl. ¶ 21; McKinnon Decl. ¶ 12; Pulliam Decl. ¶¶ 10-13.)

53. Plaintiffs allege that limits on cross-border migration may result in harm. (See, e.g., Flesch Decl. ¶ 15 (alleging that populations *may* go extinct due to random events such as disease or drought); McKinnon Decl. ¶ 12 (stating that habitat fragmentation “could, in time, decrease genetic diversity and viability of remaining populations).) As noted in their own declarations, however, for common wildlife species that are broadly distributed, the potential impact of more limited migration to the populations of these species is not well known. (Luce Decl. ¶ 15.) CBP’s prior analysis of similar projects indicates that plaintiffs’ allegations of harm are exaggerated. For example, as noted above, in 2013 CBP completed an EA concerning the construction of approximately five (5) miles of pedestrian fencing in Lukeville, Arizona (the “Lukeville Project”), which is within the Challenged Project Areas, specifically the Tucson 2 Project Area. Like the Challenged Projects, the majority of the construction activities for the Lukeville Project were to occur in a 60-foot strip of federally-owned property immediately adjacent to the border that was already functioning as a law enforcement zone. The area was heavily disturbed and contained existing border infrastructure, including permanent vehicle barriers that were constructed by the NPS in 2003. Exhibit 5 at 1-3, 2-1 – 2-2. In its analysis of potential impacts to wildlife, CBP concluded that, because the project area was already disturbed, the amount of land permanently impacted by the project would be negligible. *Id.* at 4-5. CBP also concluded that construction activities would only result in minor adverse impacts to

¹ Notably, Peninsular Big Horn Sheep, which are a distinct population segment of bighorn sheep, are a federally-listed species; however, they only occur in the Peninsular Ranges of California. See *United States Fish and Wildlife, Endangered Species Status for the Peninsular Ranges Population Segment of the Desert Bighorn Sheep in Southern California* (March 1998) available at: <https://www.govinfo.gov/content/pkg/FR-1998-03-18/pdf/98-6998.pdf#page=1>; *United States Fish and Wildlife Service, Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California* (October 2000), available at https://ecos.fws.gov/docs/recovery_plan/001025.pdf. Bighorn sheep are not a listed species in Arizona.

species. *Id.* In reaching that conclusion, CBP noted that mobile animals would escape to other areas of similar habitat, and while slow or sedentary species could be injured or lost, this would not result in a substantial reduction on a regional scale due to the tens of thousands of acres of suitable, similar habitat adjacent to the project corridor. Finally, while CBP acknowledged that the pedestrian fence could affect transboundary migration patterns of animals, including larger animals, the impacts were considered minimal because habitat fragmentation typically affects species with small population size that are dependent on migration to obtain spatially or temporally limited resources. *Id.*

54. It also cannot be overlooked that the Challenged Projects will not, as plaintiffs appear to suggest, result in pedestrian fencing being placed along the entire length of the Arizona border. (See, e.g., Jordahl Decl ¶ 21 (“If the existing vehicle barriers are converted into border walls the cross-border migration of species like mule deer, javelina, bobcats, big horn sheep, and bobcats would be stopped.”); McKinnon Decl. ¶ 12 (“A border wall bifurcating Arizona and Sonora would fragment habitat and harm the regions unique biodiversity.”).) As noted on the map that is attached as Exhibit 4, there are large areas, particularly to the east of the Tucson 1 and 2 Project Areas and to the west of the San Pedro Project Area, that have either vehicle barrier or no barrier at all.²

3. Other Resources or Alleged Harms

55. In addition to the allegations detailed above, plaintiffs have set forth a number of other concerns regarding a range of issues, including lighting, hydrological impacts, and flooding.

² Because the standard design of the planned bollard wall includes four-inch gaps between the bollards, it will allow for continued passage of smaller species, including reptiles like the Gila monster and Flat-tailed horned lizard.

56. Plaintiffs raise concerns about the potential impacts from lighting associated with the Challenged Projects. They claim, for example, that lighting from the Challenged Projects will have significant impacts on wildlife movement (Luce Decl. ¶ 12) or that light pollution from the project will impact stargazing or “detract from [their] ability to experience the natural world” (Jordahl ¶ 15). However, as a part of project design and execution of the Challenged Projects, CBP will take steps, including the installation of light shields, to minimize or control any light spillage beyond the approximately 60-foot area along the border that contains the primary project footprint and currently functions as a law enforcement zone. Moreover, that 60-foot area along the border is surrounded by huge swaths of federally-protected land. As noted, the OPCNM is 330,689 square acres or 516 square miles, the CPNWR is 803,418 acres or over 1,200 square miles, and the SPRNCA is 57,000 square acres or over 89 square miles. In light of the measures CBP will take to minimize lighting impacts and the size of the construction/lighting footprint relative to its surrounding area, it would appear that plaintiffs have exaggerated the potential lighting impacts from the Challenged Projects.

57. Plaintiffs have also expressed concerns about potential hydrological impacts. For example, plaintiffs raise concerns about the impact of border barrier on washes and channels, claiming that border barrier can cause such washes or channels to widen, leading to erosion and other negative impacts. (Girard Decl. ¶¶ 10-14.) Plaintiffs also note the risk of flooding, citing a prior incident in 2011 where water and debris “blew out” a section of pedestrian fencing on the OPCNM. (See, e.g., Girard ¶ 15; Luce ¶ 9.)

58. The 2011 incident on the OPCNM involved “mesh-style” pedestrian fencing. Relative to the mesh-style fencing, the new bollard wall design is much better equipped to handle the flow of water. Further, for those areas within the Challenged Project Areas where the barrier

will cross washes or channels, in addition to improvement of bollard-style fencing, a number of steps will be taken to attempt to minimize impacts to such washes and reduce the risk of flooding. CBP and DoD are already aware of additional designs for washes and large water crossings that have been used in other areas of the border that may be implemented to minimize such risks. For example, the bollards can be spaced five (5) inches apart rather than four in order to allow for additional water flow. In addition, barriers can be designed with swing or lift gates that can be utilized during significant monsoon or other rain events. Beyond the design measures CBP is already aware of, the alignment and design will be subjected to rigorous hydrological modeling and assessment. And, as noted above, federal land and resource managers will be given the opportunity to recommend design changes that may help to minimize hydrological impacts. Furthermore, CBP's existing tactical infrastructure maintenance program includes the regular removal of any accumulated debris from grates and gates located within lower water crossings. During anticipated heavy rain events, the maintenance staff working in coordination with Border Patrol agents will open gates and grates to allow for increased water flow and the passage of large debris.

59. In addition to concerns about hydrological impacts to washes or channels, plaintiffs cite concerns about potential hydrological impacts to the San Pedro River. Plaintiffs claim that the San Pedro Project could "seriously alter the base and flood flows" of the San Pedro River (Misztal Decl. ¶ 9) or jeopardize its status as "one of the last free-flowing rivers in the American Southwest" (Stromberg Decl. ¶ 6). Similarly, plaintiffs again cite fears about flooding. Pointing to the 2011 incident at OPCNM, plaintiffs claim the new barrier will "undoubtedly" collapse creating a "tidal-wave type of wall of water," which they claim will be devastating to the ecosystem and landowners. (Silver Decl. ¶ 22.)

60. Here again, plaintiffs have exaggerated the risk of potential impacts. As noted above, the barrier designs for the portion that will span the San Pedro River is not yet complete. However, there is no question that the final design will allow for continued flow of the San Pedro River, which flows north from Mexico. A design that ensures continued flow of the river is in CBP's own interest and essential to cooperation with Mexico through the IBWC. Further, before it is finalized the design will be subjected to hydrological modeling and review by, CBP, DoD, IBWC, and federal land and resource managers. Thus, it is inaccurate for plaintiffs to assert, unequivocally, that the San Pedro Project will alter the base and flood flows of the San Pedro River or that it will jeopardize its status as one of the last free-flowing rivers in the southwest. Plaintiffs' assertion that the new barrier will "undoubtedly" collapse is also misplaced. The barrier design for the San Pedro Project will be subjected to stringent hydrological modeling and inter-agency reviews. In addition, the comparison to the 2011 incident at the OPCNM is inapt. As noted, that incident involved mesh-style pedestrian barrier, which is not what will be installed in the river as a part of the San Pedro Project.

61. Plaintiffs state that they are concerned about potential hydrological impacts to Quitobaquito Springs, citing the potential impacts from wells and what that could mean for water drawdown or future outflow from the spring. (Jordahl ¶ 20.) Quitobaquito Springs is located approximately .25 miles north of the project area for Tucson Project 1. See Exhibit 3. It is not within the construction footprint. Nevertheless, as noted above, steps are being taken to minimize or avoid potential hydrological impacts. For instance, as noted above, the construction contractor for the San Pedro Project, at the request of NPS, has agreed that it will not drill wells within five (5) miles of either side of the Quitobaquito Springs. During its consultation with federal land management and resource agencies regarding the Challenged Projects, they

expressed concerns about blasting activities and the impacts blasting could have on the hydrology of Quitobaquito Springs. However, CBP has assured the federal land managers and resource agencies that there will be no blasting associated with project execution. Similarly, the federal land managers and resource agencies posed questions about the trenching that will be required for the barrier footer, noting that it too could have hydrological impacts that affect Quitobaquito Springs. However, the barrier will only require trenching to a depth of seven (7) feet. Thus, the trenching poses little risk to groundwater that has a hydrological connection to Quitobaquito Springs. Although hydrological impacts to Quitobaquito Springs are unlikely, CBP has nevertheless agreed to monitor water levels within Quitobaquito Springs during construction. In light of the above, plaintiffs' fears appear to be unfounded.

62. Plaintiffs also express concerns about a loss of vegetation. For instance, plaintiffs assert that the Challenged Projects will result in the destruction of "hundreds, if not thousands" of organ pipe cactuses. (Jordahl Decl. ¶ 22.) However, in light of CBP and DoD's requirement that the construction contractor protect in place any saguaro or organ pipe cactuses and agave plants found within the Challenged Project Areas and to relocate cactuses and agave that cannot be protected in place, plaintiffs' assertion about the purported loss of cactuses is unfounded. See Exhibit 6 § 1.13.5.3.d.; § 1.13.5.4.

4. Recreational and Aesthetic Injuries

63. Finally, plaintiffs put forth a number of claims concerning purported recreational or aesthetic injuries. (E.g., Walsh Decl. ¶ 20; Silver Decl. ¶ 22.) For example, plaintiffs assert that the Challenged Projects will "severely erode the character of a special and unique region" (Jacobs Decl. ¶ 6) or harm their interest and enjoyment of public lands (McKinnon Decl. ¶ 12).

64. The evidence does not support plaintiffs' suggestions or assertions the Challenged Projects will significantly harm plaintiffs' recreational activities or aesthetic interests.

Importantly, the Challenged Projects will not cause any significant changes to the existing land uses in the Challenged Project Areas. As discussed, these areas are already disturbed, include existing barriers and roads, and function primarily as a law enforcement zone.

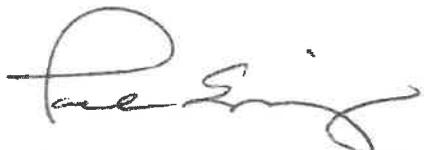
65. Further, the Challenged Projects will not cause any significant change to the existing land uses in the areas that surround the Challenged Project Areas, which include vast tracts of federally-protected lands. As noted, these areas include the OPCNM, which is 330,689 square acres or 516 square miles, the CPNWR, which is 803,418 acres or over 1200 square miles, and the SPRNCA, which is 57,000 acres or over 89 square miles. Plaintiffs may continue to recreate in and enjoy these natural and undeveloped areas that adjoin the Challenged Project Areas. Given their size relative the small project footprint of the Challenged Projects, the evidence does not support plaintiffs' assertion that the Challenged Projects will irreparably harm plaintiffs' ability to hike, camp, and recreate in these areas or fundamentally alter their unique character.

66. In fact, enhanced border security may enhance plaintiffs' ability to recreate in and enjoy the areas surrounding the Challenged Projects Areas. There are historical examples, including on the OPCNM, where CBP's construction of border barriers has resulted in increased public access and use in areas surrounding the border because barrier construction has reduced illegal traffic and, in turn, made such areas safer for access and use by the public.

* * * *

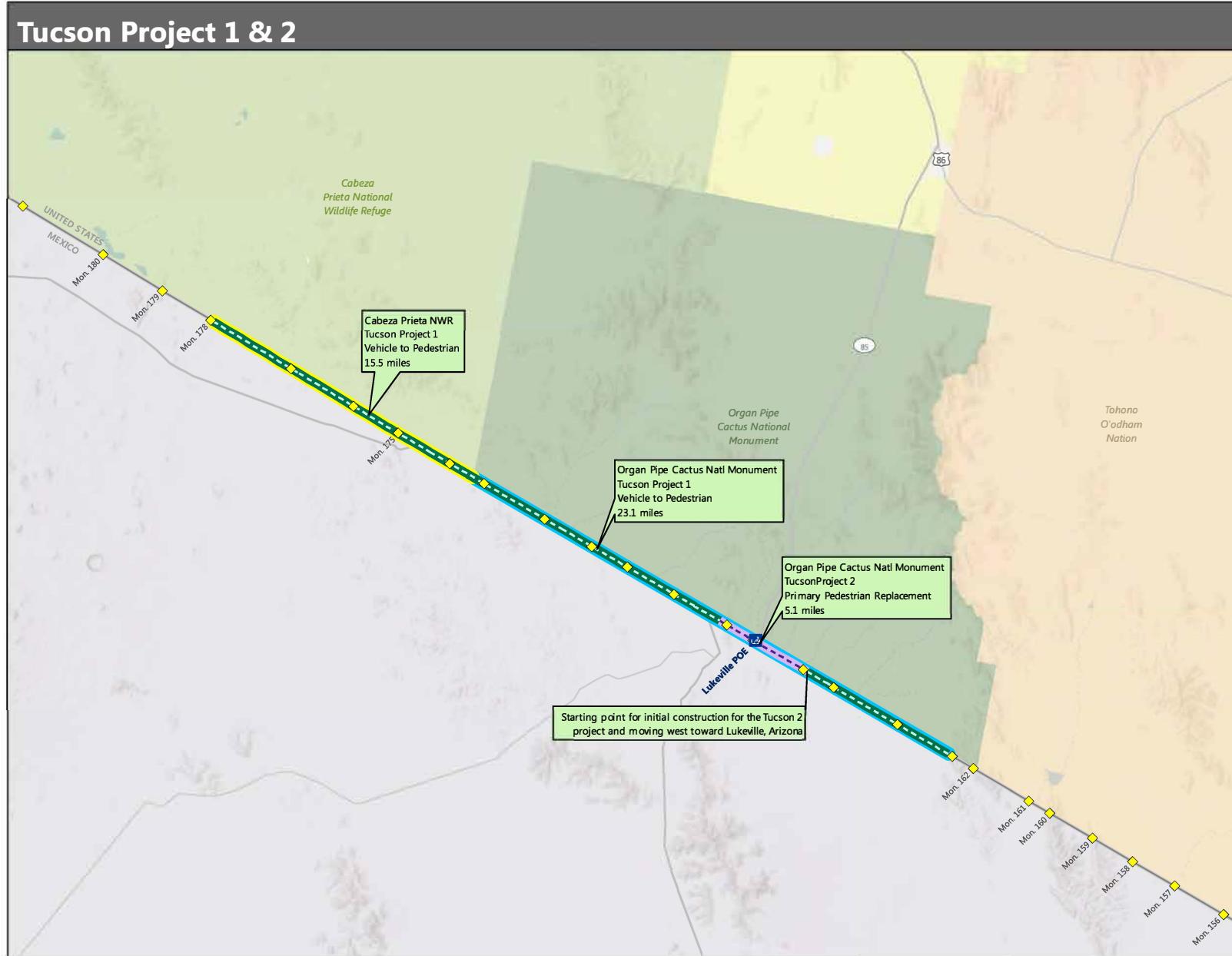
This declaration is made pursuant to 28 U.S.C. § 1746. I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 13 day of August, 2019.



Paul Enriquez
Acquisitions, Real Estate and Environmental Director
Border Wall Program Management Office
U.S. Border Patrol

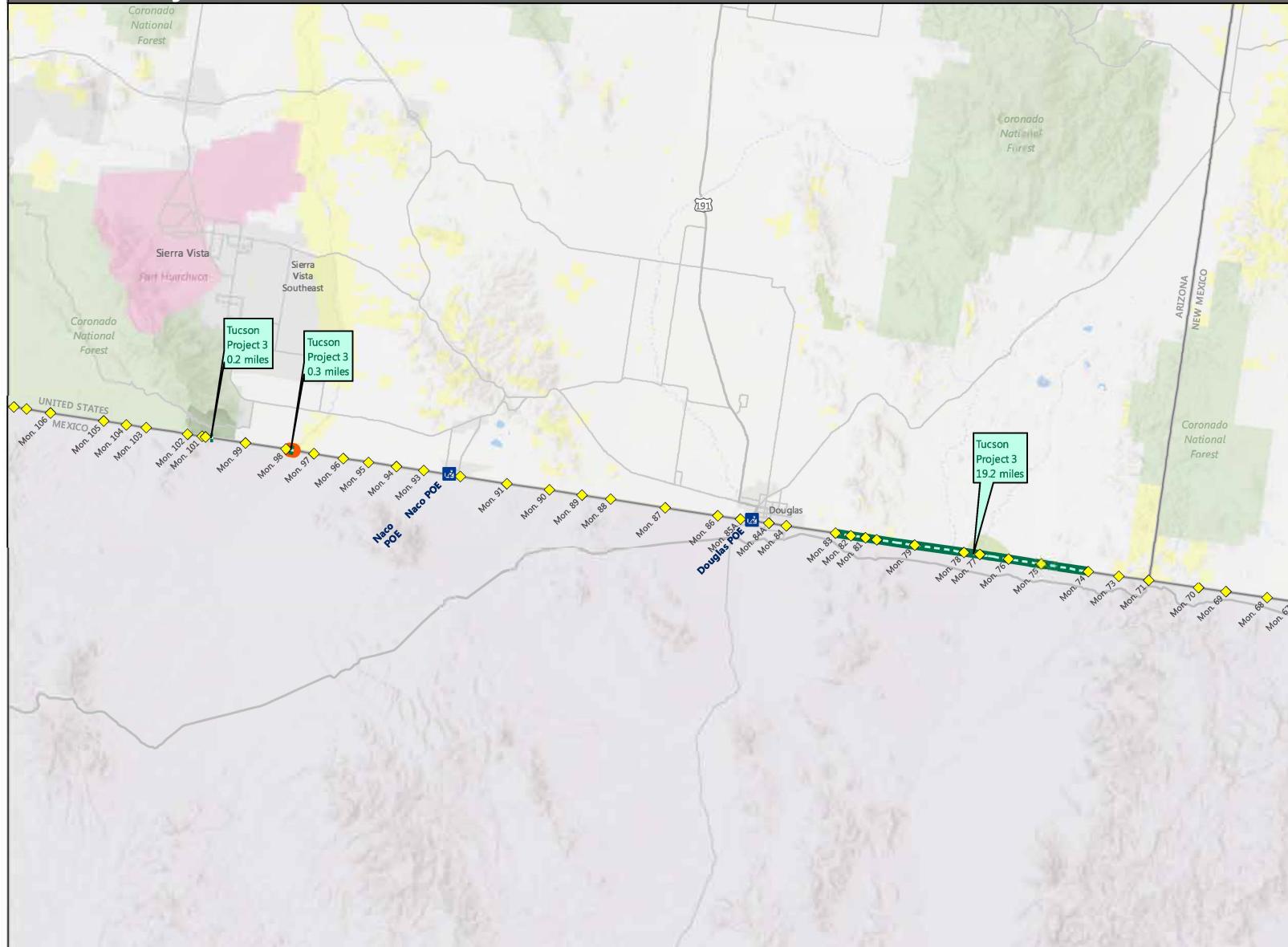
Exhibit 1



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Exhibit 2

Tucson Project 3



LEGEND

Proposed Barrier (10 USC § 284)

Replacement of Existing Vehicle Barrier with New Pedestrian Barrier

San Pedro Riparian

*If sheet measures less than 11x17" it is a reduced print.
Reduce scale accordingly.

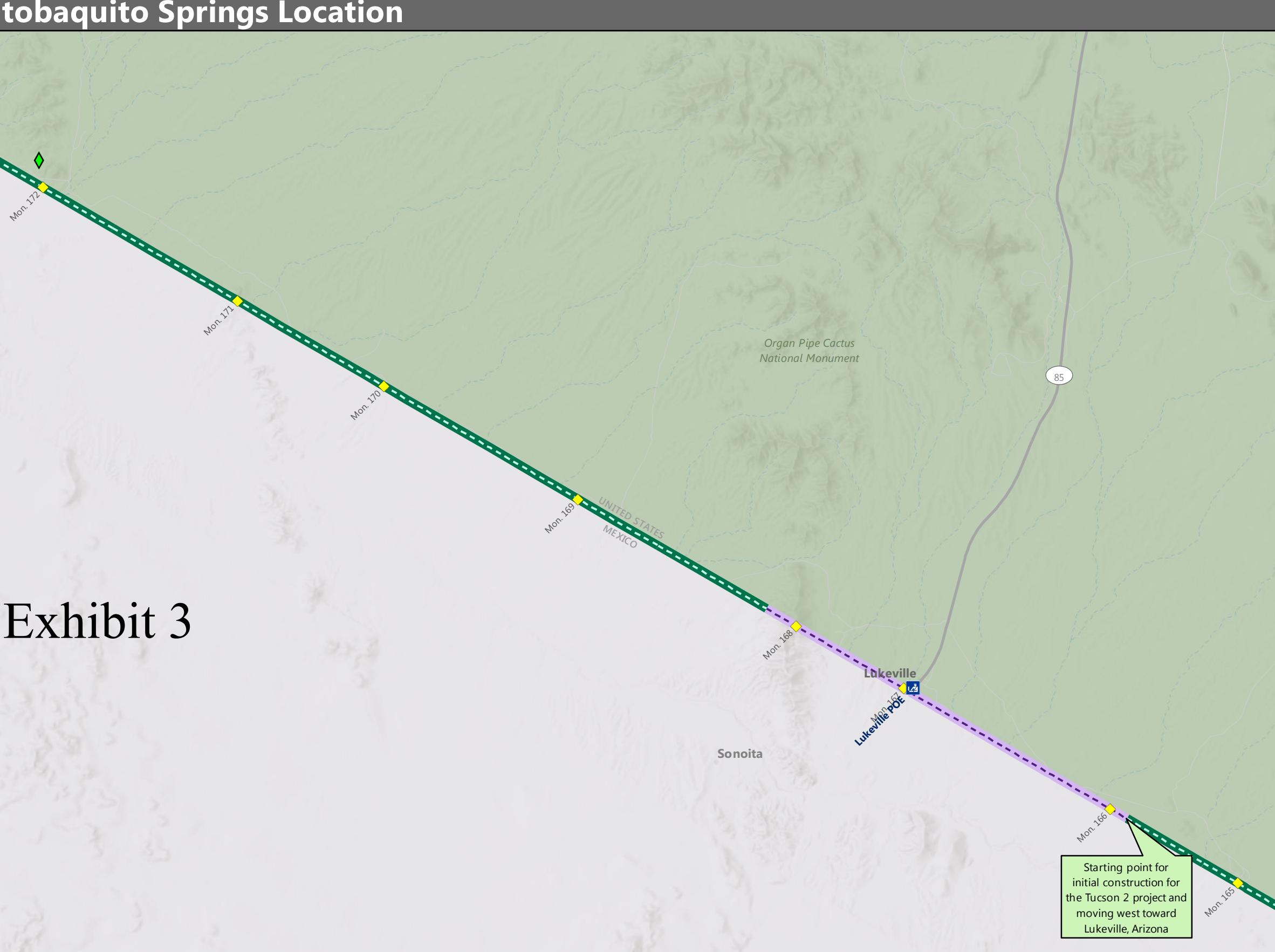
1 in = 7.51 mi

1:475,587



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Quitobaquito Springs Location



LEGEND

◆ Quitobaquito

Proposed Barrier (10 USC § 284)

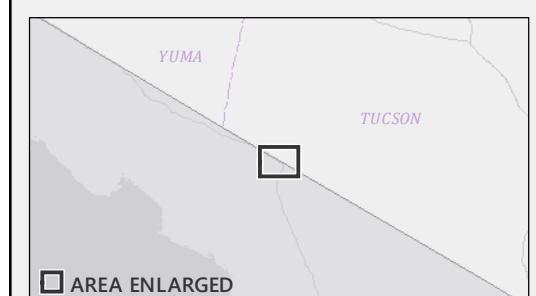
Replacement of Existing Pedestrian Barrier with New Pedestrian Barrier

Replacement of Existing Vehicle Barrier with New Pedestrian Barrier

*If sheet measures less than 11x17" it is a reduced print.
Reduce scale accordingly.

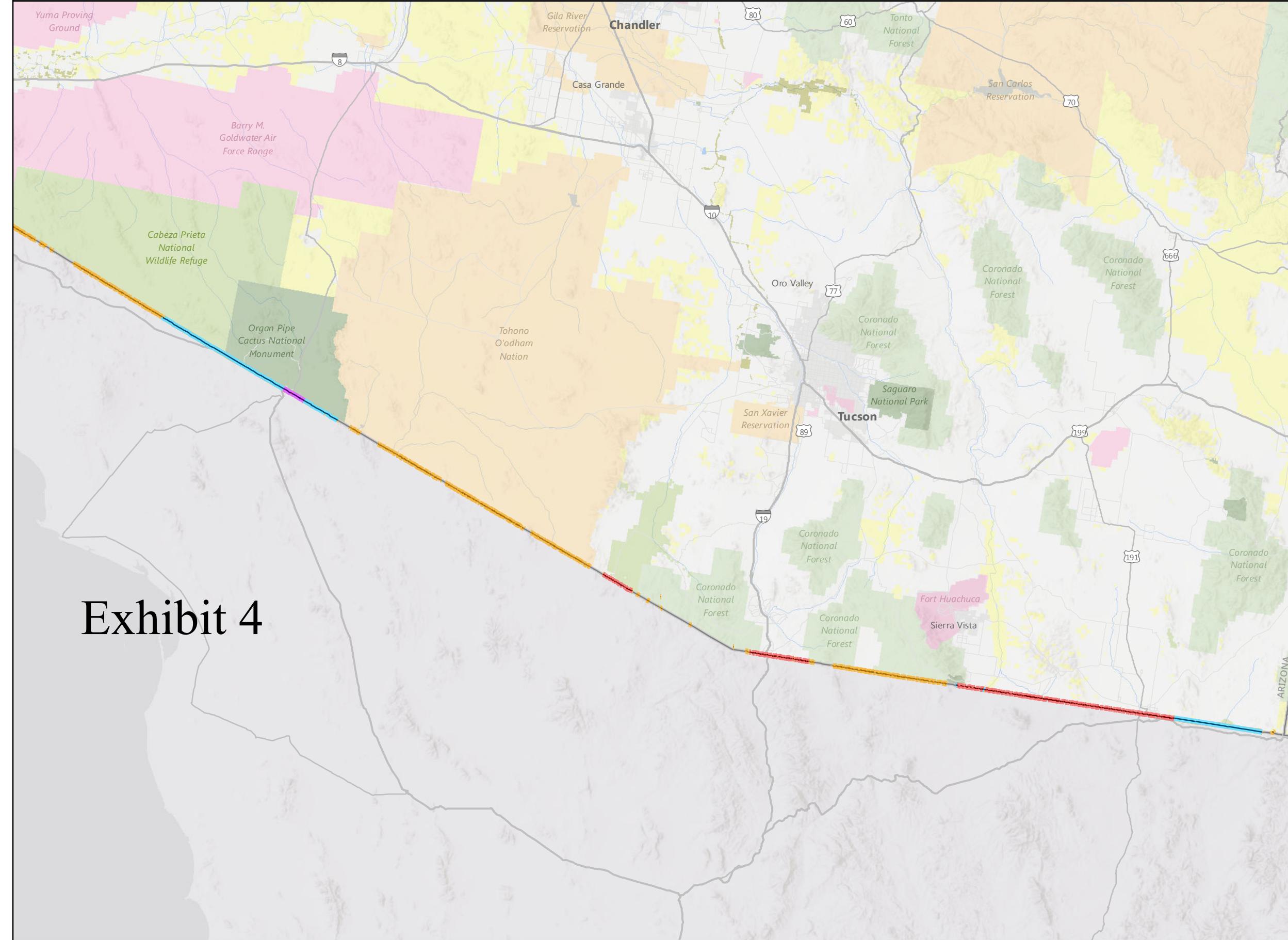
1 in = 1.28 mi

1:81,277



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Existing and Proposed Barrier



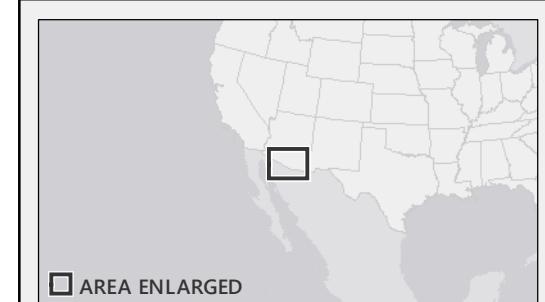
LEGEND

- Existing Pedestrian (Red wavy line)
- Existing Vehicle (Yellow wavy line)
- Under Contract to Replace Existing Pedestrian Barrier with New Pedestrian Barrier (Purple wavy line)
- Under Contract to Replace Existing Vehicle Barrier with New Pedestrian Barrier (Blue wavy line)

*If sheet measures less than 11x17" it is a reduced print.
Reduce scale accordingly.

1 in = 21.32 mi

1:1,350,979



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Exhibit 5

Final

**ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED INSTALLATION, OPERATION, AND
MAINTENANCE OF PRIMARY PEDESTRIAN FENCE
NEAR LUKEVILLE, ARIZONA
U.S. BORDER PATROL
TUCSON SECTOR**



**U.S. Department of Homeland Security
U.S. Customs & Border Protection
U.S. Border Patrol
Washington, D.C.**

February 2008

**FINDING OF NO SIGNIFICANT IMPACT
FOR THE PROPOSED INSTALLATION, OPERATION, AND
MAINTENANCE OF PRIMARY PEDESTRIAN FENCE
NEAR LUKEVILLE, ARIZONA
U.S. BORDER PATROL
TUCSON SECTOR**

PROJECT HISTORY: The United States (U.S.) Border Patrol (USBP) is a law enforcement entity of U.S. Customs and Border Protection (CBP), a component of U.S. Department of Homeland Security (DHS). USBP's priority mission is to prevent the entry of terrorists and terrorist weapons and to enforce the laws that protect the U.S. homeland by the detection, interdiction, and apprehension of those who attempt to illegally enter or smuggle any person or contraband across the sovereign borders of the U.S.

During recent years, illegal aliens (IA) and illegal entry into the U.S. along the U.S.-Mexico border in southern Arizona has become a severe problem. Consequently, USBP has significantly increased its emphasis on deterrence. Deterrence is achieved only when USBP has the ability to create and convey the immediate, credible, and absolute certainty of detection and apprehension. As such, tactical infrastructure components, such as fencing and roads, are a critical element in the current enforcement strategy. Developing trends such as the recognition of environmental preservation concerns and the increase of criminal trans-boundary activities (including trafficking in people, drugs, and terrorism efforts) continue to pose a border enforcement challenge and support the ever increasing need for tactical infrastructure along the international border.

In 2001, the Immigration and Naturalization Service (INS) prepared the Supplemental Programmatic Environmental Impact Statement (SPEIS) for INS and Joint Task Force 6 (JTF-6) Activities along the U.S.-Mexico Border. Additionally, in December 2003, National Park Service (NPS) issued a Final Finding of No Significant Impact (FONSI) and Final EA for the Proposed Permanent Vehicle Barriers (PVB) across the southern boundary of the Organ Pipe Cactus National Monument (OPCNM) in Pima County, Arizona. The PVBs span approximately 30 miles of the U.S.-Mexico border. The PVBs constructed by NPS have served effectively and efficiently in deterring and hindering illegal vehicle traffic on the OPCNM.

PROJECT LOCATION: The project corridor for the proposed action extends 2.1 miles to the west and 3.1 miles to the east of the Lukeville Port of Entry (POE), which encompasses approximately 5.2 miles total.

PURPOSE AND NEED: The purpose and need for the NPS 2003 Final EA was to prevent illegal vehicle traffic from degrading the biological resources of OPCNM as well as to protect the health and safety of Federal staff and visitors. The construction of the PVBs met the stated purpose and need of the NPS 2003 Final EA. However, since the completion of the NPS 2003 Final EA, shifts in IA traffic and recent Federal legislation have required changes in the designs of border tactical infrastructure. Therefore, the purpose of the proposed primary pedestrian fence is to help CBP agents and officers gain effective control of our nation's borders. CBP is developing and deploying the appropriate mix of technology, infrastructure, and personnel. In some locations, primary pedestrian fence is a critical element of border security. In alignment with Federal mandates, USBP has identified this area of the border as a location where primary pedestrian fence would contribute significantly to their priority homeland security mission. The

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need for the proposed action is to meet USBP operational requirements; provide a safer environment for USBP agents, NPS staff, and general public; deter IAs by constructing an impediment to northward movement into the U.S.; enhance the response time of USBP agents; and meet the mandates of Federal legislation (i.e., Secure Fence Act of 2006 and 2007 Department of Homeland Security [DHS] Appropriations Act [HR 5441]).

ALTERNATIVES: Two alternatives were carried forward for analysis: Alternative 1: No Action Alternative and Alternative 2: Proposed Action Alternative (i.e., Preferred Alternative).

Alternative 1: No Action Alternative: The No Action Alternative would preclude the installation of primary pedestrian fence. The existing PVBs would continue to be maintained by NPS. The No Action Alternative does not meet the project's purpose and need, but has been carried forward for analysis, as defined in 40 Code of Federal Regulations (CFR) Section 1502.14. The No Action Alternative does not meet the mandates of Federal legislation and does not enhance the detection, deterrence, or apprehensions of IAs.

Alternative 2: Proposed Action Alternative: The Proposed Action Alternative includes the construction and maintenance of 5.2 miles of primary pedestrian fence along the U.S.-Mexico border near Lukeville, Arizona. The project corridor would extend 2.1 miles to the west and 3.1 miles to the east of the Lukeville POE. Approximately 5.2 miles of primary pedestrian fence would be constructed. Construction activities would remain within the 60-foot Roosevelt Reservation with the exception of the western most 0.65 miles. The western most 0.65 miles, which would be built over Sonoyta Hill, requires a construction footprint of 150 feet. The primary pedestrian fence would be installed approximately 3 feet north of the existing PVBs with the exception of the western most 0.65 miles over Sonoyta Hill. Due to the lack of PVBs over Sonoyta Hill the fence would be constructed approximately 3 feet north of the U.S.-Mexico border within these 0.65 miles. A mesh fence design would be used and would meet design performance measures which dictate that the fence must:

- extend 15 feet above ground and 3 to 6 feet below ground;
- be capable of withstanding a crash of a 10,000-pound (gross weight) vehicle traveling at 40 miles per hour;
- be semi-transparent, as dictated by operational need;
- be vandal resistant;
- be designed to survive the extreme climate changes of a desert environment;
- not impede the natural flow of water; and
- allow for maintenance access to border monuments as required by the U.S. Section, International Boundary and Water Commission.

Furthermore, in most washes or arroyos, the fence would be designed and constructed to ensure proper conveyance of floodwaters and to eliminate the potential to cause backwater flooding on

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either side of the U.S.-Mexico border. CBP will remove debris from the fence within washes/arroyos immediately after rain events to ensure that no backwater flooding occurs.

Staging areas and turnarounds would be located within the Roosevelt Reservation. Construction access would include the use of the existing patrol road adjacent to the U.S.-Mexico border as well as South Puerto Blanco Road in order to construct the primary pedestrian fence and road over Sonoyta Hill. Additionally, the road, existing PVBs, and primary pedestrian fence would be maintained by CBP to ensure the integrity of the road and primary pedestrian fence is not compromised.

ENVIRONMENTAL CONSEQUENCES: The Proposed Action Alternative could permanently impact up to 45 acres. However, approximately 17 acres of the project corridor are previously disturbed from the construction of the existing PVBs. Impacts to wildlife, unique and sensitive areas, vegetation, and aesthetics would be expected. Wildlife movement across the international boundary would be impeded within the corridor, but these impacts would be minimal to local and regional wildlife populations. The viewshed of the OPCNM would be impacted by the construction of the pedestrian fence; however, once completed, the fence would afford greater safety to park visitors and sensitive resources. Temporary impacts to air quality, noise, and water resources are expected during construction.

CBP has determined that the Proposed Action Alternative may adversely affect the lesser long-nosed bat and Sonoran pronghorn. Consequently, CPB and the USFWS are currently in formal Section 7 consultation to address these effects and identify conservation measures. Some conservation measures for the pronghorn that have been identified and would be implemented include:

1. During construction USBP will conduct daily observations of project region as close to dawn as possible to determine if Sonoran pronghorn are within 0.62 mile of project activities. No project work will begin until pronghorn move on their own volition to a distance greater than 0.62 mile from the activities. This measure would be relevant for those activities only on the western slope of Sonoyta Hill, where there is a greater potential for pronghorn to occur.
2. The number of vehicles traveling to and from the project site for construction purposes and the number of trips per day will be minimized to reduce the likelihood of disturbing pronghorn in the area or injuring an animal on the road. The use of vehicle convoys, multi-passenger vehicles, and other methods are appropriate to project construction.
3. CBP will provide assistance to annually fill one supplemental water for Sonoran pronghorn on OPCNM per the CBP programmatic mitigation agreement with USFWS.

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Examples of other conservation measures that have been identified and would be implemented to offset effects to the lesser long-nosed bat include the following:

1. Clearly demarcate the construction footprint to ensure construction contractors do not expand the disturbance area.
2. Salvage of lesser-long nosed bat food plants from areas to be disturbed by project activities as described in the salvage plan.
3. Complete a restoration plan for various illegal trails and roads to compensate for creation or improvement of roads needed for the fence project (in addition to other concerns, this will address the control of non-native, invasive plant species) within six months of issuance of the Biological Opinion.

The potential exists for shifts in illegal pedestrian traffic to adversely impact resources outside of the project corridor; however, these impacts are not quantifiable at this time because it is unknown if, when, or where this shift in traffic may occur. Because the primary pedestrian fence would act as a force multiplier, USBP would be able to deploy agents to those areas that lack pedestrian barriers in an effort to minimize any indirect adverse impacts. Indirect beneficial impacts, such as a reduced amount of trash and debris caused by IAs, would result from the construction of the Proposed Action Alternative.

No significant adverse effects to the natural or human environment, as defined in 40 CFR Section 1508.27 of the Council on Environmental Quality's Regulations for Implementing the National Environmental Policy Act, are expected upon implementation of the Proposed Action Alternative.

MITIGATION MEASURES: Mitigation measures are presented for each resource category that would be potentially affected. Many of these measures have been incorporated as standard operating procedures by the USBP on past projects. It is USBP policy to mitigate adverse impacts through the sequence of avoidance, minimization, and compensation. These mitigation measures would be incorporated into the current Project Management Plan to be carried forward.

General Construction Activities: Best Management Practices (BMPs) would be implemented as standard operating procedures during all construction activities, and would include proper handling, storage, and/or disposal of hazardous and/or regulated materials. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils and solvents would be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein. The refueling of machinery would be completed following accepted industry guidelines, and all vehicles could have drip pans during storage to contain minor spills and drips. Although it will be unlikely for a major spill to occur, any spill of reportable quantities would be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular,

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pillow, sock, *etc.*) would be used to absorb and contain the spill. Furthermore, any petroleum liquids (e.g., fuel) or material listed in 40 Code of Federal Register (CFR) 302 Table 302.4 of a reportable quantity must be cleaned up and reported to the appropriate Federal and state agencies. Reportable quantities of those substances listed on 40 CFR 302 Table 302.4 would be included as part of the Spill Prevention, Control, and Countermeasures Plan (SPCCP). A SPCCP would be in place prior to the start of construction and all personnel would be briefed on the implementation and responsibilities of this plan.

All construction would follow DHS management directive 5100 for waste management. All waste oil and solvents would be recycled. All non-recyclable hazardous and regulated wastes would be collected, characterized, labeled, stored, transported and disposed of in accordance with all Federal, state, and local regulations, including proper waste manifesting procedures.

Solid waste receptacles would be maintained at staging and bivouac areas. Non-hazardous solid waste (trash and waste construction materials) would be collected and deposited in the on-site receptacles. Solid waste would be collected and disposed of by a local waste disposal contractor. Waste materials and other discarded materials would be removed from the site as quickly as possible in an effort to keep the project area and surroundings free of litter.

Waste water (water used for project purposes that is contaminated with construction materials, was used for cleaning equipment and thus carries oils or other toxic materials or other contaminants in accordance with state regulations) is to be stored in closed containers on site until removed for disposal. Concrete wash water would not be dumped on the ground, but is to be collected and moved offsite for disposal.

Soils: Erosion control techniques, such as the use of straw bales (weed free straw), aggregate materials, wetting compounds (i.e., water) and revegetation with native plant species, where possible, would be incorporated with the design of the Proposed Action Alternative. In addition, other erosion control measures, as required and promulgated through the Storm Water Pollution Prevention Plan (SWPPP), would be implemented before and after construction activities.

Biological Resources: All contractors, work crews (including National Guard and military personnel), and CBP personnel in the field performing construction and maintenance activities would receive training on the habitat and habits of the species that are found in the area, including information on how to avoid impacts to the species from their activities. This training would be provided to all contractor and work crew project managers and senior military leaders who are working onsite. It would be the responsibility of these project managers and senior military leaders to ensure that their personnel are familiar with the BMPs and other limitations and constraints.

The Migratory Bird Treaty Act requires that Federal agencies coordinate with U.S. Fish and Wildlife Service (USFWS) if a construction activity would result in the "take" of a migratory bird.

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If construction or clearing activities are scheduled during the nesting season (typically March 15 through September 15) preconstruction surveys for migratory bird species would occur immediately prior to the start of any construction activity to identify active nests. If construction activities would result in the "take" of a migratory bird, then coordination with USFWS and Arizona Game and Fish Department would occur, and applicable permits would be obtained prior to construction or clearing activities.

Although no Sonoran desert tortoises or Mexican rosy boas were observed during biological surveys the potential exists for these species to occur in and near Sonoya Hill. In the event a tortoise or boa is observed within the construction corridor during construction activities, a qualified biologist would capture and relocate the individual to an area outside of the corridor but still on Sonoya Hill.

CBP would truck water into the project site for purposes of construction to ensure that no impacts to flora or fauna near and within Quitobaquito Springs would occur.

A salvage plan would be developed by the CBP, in close coordination with NPS, prior to construction activities. CBP will salvage as many columnar cacti as possible. CBP will develop and fund a restoration plan, in coordination with the NPS to restore illegal trails and roads on OPCNM. This will enhance bat foraging opportunities.

Materials used for on-site erosion control would be free of non-native plant seeds and other plant parts to limit potential for infestation. Additionally, all areas within the construction footprint would be monitored for a period of three years for the spread and eradication of non-native and invasive species. Construction equipment would be cleaned using BMPs prior to entering and departing the OPCNM to minimize the spread and establishment of non-native and invasive species.

Cultural Resources: Construction near the Gachado Line Camp would be monitored by a professional archeological monitor to ensure no impacts would occur. Buffers would be established around the three historic objects that lie within the proposed construction corridor in order to avoid any adverse effects to these significant cultural resources. If any cultural material is discovered during the construction efforts, then all activities would halt until a qualified archeologist can be brought in to assess the cultural remains.

Water Resources: Standard construction procedures would be implemented to minimize the potential for erosion and sedimentation during construction. All work would cease during heavy rains and would not resume until conditions are suitable for the movement of equipment and material. In accordance with regulations of the Environmental Protection Agency Phase II of the National Pollutant Discharge Elimination System stormwater program, a SWPPP would be required for stormwater runoff from construction activities greater than 1 acre and less than 5 acres. Therefore, a SWPPP would be prepared and the Notice of Intent submitted prior to the start

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of any construction. Equipment required for the construction activities would not be staged or stored within 100 feet of any wash to prevent any contamination from accidental petroleum, oil, or lubricant spills that could occur. Primary pedestrian fence constructed in washes/arroyos would be designed to ensure proper conveyance of floodwaters and to eliminate the potential to cause backwater flooding on either side of the U.S.-Mexico border. Immediately after rain events, CBP would be responsible for ensuring that debris is removed from the primary pedestrian fence within washes/arroyos to ensure that no backwater flooding occurs. Additionally, all concrete trucks would be washed and cleaned outside of the project corridor and OPCNM lands.

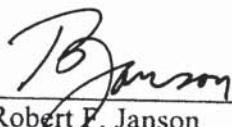
Air Quality: Standard construction practices such as routine watering of the construction site would be used to control fugitive dust during the construction phases of the proposed project. Additionally, all construction equipment and vehicles would be required to be kept in good operating condition to minimize exhaust emissions.

Noise: During the construction phase, short-term noise impacts are anticipated. All Occupational Safety and Health Administration requirements would be followed. On-site activities would be restricted to daylight hours with the exception of concrete pours and emergency situations. Construction equipment would possess properly working mufflers and would be kept properly tuned to reduce backfires. Implementation of these measures would reduce the expected short-term noise impacts to an insignificant level in and around the construction site.

Aesthetics: In order to minimize potential aesthetic impacts over Sonoyta Hill, CBP would use subdued and non-reflective materials to build the primary pedestrian fence. These materials are expected to blend with the landscape as it naturally rusts.

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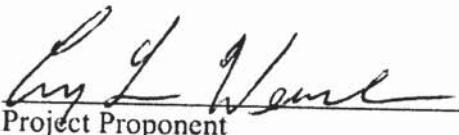
FINDING: Based upon the results of the environmental assessment and the mitigation measures to be incorporated as part of the Proposed Action Alternative, it has been concluded that the Proposed Action Alternative will not have a significant effect on the environment. Therefore, no further environmental impact analysis is warranted.



Robert F. Janson
Office of Finance Management
Acting Executive Director, Asset Management
U.S. Customs and Border Protection

2/13/08

Date



Project Proponent
Assistant Chief Patrol Agent, Craig Weinbrenner
Office of Border Patrol
Tucson Sector Headquarters

1/130/08

Date

Final

**ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED INSTALLATION, OPERATION, AND
MAINTENANCE OF PRIMARY PEDESTRIAN FENCE
NEAR LUKEVILLE, ARIZONA
U.S. BORDER PATROL
TUCSON SECTOR**

January 2008

Lead Agency: U.S. Customs and Border Protection
Asset Management Division
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EXECUTIVE SUMMARY

BACKGROUND:	National Park Service (NPS) issued a Finding of No Significant Impact (FONSI) and Final Environmental Assessment (EA) for the Proposed Permanent Vehicle Barriers (PVB) in 2003, which addressed the construction of PVBs across the southern boundary of the Organ Pipe Cactus National Monument (OPCNM) in Pima County, Arizona. The PVBs span approximately 30 miles of the United States (U.S.) – Mexico border. The PVBs constructed by the NPS have served effectively and efficiently in deterring and hindering illegal vehicle traffic on the OPCNM.
PURPOSE AND NEED FOR THE PROPOSED PROJECT:	The purpose of the proposed primary pedestrian fence is to help U.S. Customs and Border Protection (CBP) agents and officers gain effective control of our nation's borders. CBP is developing and deploying the appropriate mix of technology, infrastructure, and personnel. In some locations, primary pedestrian fence is a critical element of border security. In alignment with Federal mandates, U.S. Border Patrol (USBP) has identified this area of the border as a location where primary pedestrian fence would contribute significantly to their homeland security mission. The need for the proposed action is to meet USBP operational requirements; provide a safer environment for USBP agents, NPS staff, and general public; deter illegal aliens (IAs) by constructing an impediment to northward movement into the U.S.; enhance the response time of USBP agents; and meet the mandates of Federal legislation (i.e., Secure Fence Act of 2006 and 2007 Department of Homeland Security [DHS] Appropriations Act [HR 5441]).
PROPOSED ACTION:	<p>The Proposed Action Alternative includes the construction and maintenance of 5.2 miles of primary pedestrian fence along the U.S.-Mexico border near Lukeville, Arizona. Approximately 3.1 miles and 2.1 miles of primary pedestrian fence would be installed on the east and west sides of the Lukeville POE, respectively. The primary pedestrian fence would be constructed approximately 3 feet north of the existing PVBs with the exception of 0.65 miles over Sonoyta Hill. Construction activities would remain within the 60-foot Roosevelt Reservation with the exception of the western most 0.65 miles. The western most 0.65 miles, which would be built over Sonoyta Hill, requires a construction footprint of 150 feet and the fence would be built approximately 3 feet north of the U.S.-Mexico border due to no PVBs existing over Sonoyta Hill.</p> <p>The design selected for the primary pedestrian fence is a mesh design. It would be 15 feet high and capable of withstanding a crash from a 10,000-pound (gross weight) vehicle traveling at 40 miles per hour. Currently, an existing patrol road parallels most of the border in the project corridor, which would also be used for access during construction of the primary pedestrian fence and as a maintenance road when construction is completed. However, this road would</p>

need to be widened by approximately 30 feet to accommodate construction equipment needed to install the fence. This construction/maintenance road would encompass the entire 60-foot wide Roosevelt Reservation once completed. In addition, a new road would need to be constructed in order to install the primary pedestrian fence over Sonoyta Hill; this new road would be in the westernmost 0.65 mile of the project corridor. CBP will be responsible for maintaining the road, existing PVBs, and primary pedestrian fence.

ALTERNATIVES TO THE PROPOSED ACTION:

Alternatives addressed in the EA include: Alternative 1: No Action Alternative, which would preclude the construction of any primary pedestrian fence, and Alternative 2: Proposed Action Alternative (i.e., Preferred Alternative). The No Action Alternative would not fully meet the mandate established by Federal legislation and only incrementally enhances the detection, deterrence and apprehension of IAs.

ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION:

The Proposed Action Alternative would potentially result in permanent impacts of up to 45 acres. However, approximately 17 acres of the project corridor have been previously disturbed from the construction of the existing PVBs. Direct impacts to vegetation, wildlife, unique and sensitive areas, and aesthetics would be expected. Wildlife movement across the international boundary would be impeded within the corridor, but these impacts would be minimal to local or regional wildlife population. The viewshed of the OPCNM would be impacted by the construction of the primary pedestrian fence; however, once completed, the primary pedestrian fence would afford greater safety to park visitors and sensitive resources. Additionally, mitigation measures would be implemented (i.e., using subdued and non-reflective materials) to ensure impacts to aesthetics would not be considered significant. No significant impacts on any human or natural resources either locally or regionally would be expected upon implementation of the Proposed Action Alternative.

CONCLUSIONS:

Based upon the results of this EA, it has been concluded that the Proposed Action Alternative would not have a significant adverse effect on the environment, and no additional National Environmental Policy Act documentation is warranted.

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SECTION 1.0
INTRODUCTION AND PURPOSE AND NEED

1.0 INTRODUCTION AND PURPOSE AND NEED

1.1 INTRODUCTION

This Environmental Assessment (EA) addresses the potential effects, beneficial and adverse, of the proposed installation of 5.2 miles of primary pedestrian fence near Lukeville, Arizona. The action is proposed by United States (U.S.) Border Patrol (USBP) Tucson Sector and would occur in the Ajo Station's Area of Operation (AO). This EA is tiered from the 2001 Supplemental Programmatic Environmental Impact Statement (SPEIS) for Immigration and Naturalization Service (INS) and Joint Task Force 6 (JTF-6) Activities along the U.S.-Mexico Border (INS 2001). The SPEIS was developed in an attempt to provide the public with USBP's assessment of impacts as they relate to potential future infrastructure projects. Mentioned in the SPEIS is the potential to construct fence, roads, and other infrastructure along the U.S.-Mexico border including Arizona. In addition, information was gleaned from and incorporated by reference from the National Park Service (NPS), Organ Pipe Cactus National Monument (OPCNM) Finding of No Significant Impact (FONSI) and Final EA for the Proposed Permanent Vehicle Barriers (PVB) December 2003 (NPS 2003). The OPCNM Final EA addressed the proposed construction of approximately 30 miles of PVB along OPCNM's U.S.-Mexico border.

This EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) Regulations implementing NEPA (Title 40 of the U.S. Code of Federal Regulations [CFR], Parts 1500-1508), and Department of Homeland Security (DHS) Management Directive 5100.1, which is the Environmental Planning Program Directive that outlines DHS's procedures for the implementation of NEPA.

1.2 HISTORY AND BACKGROUND

1.2.1 CBP History

In 1924, Congress created USBP to serve as the law enforcement entity of INS, which it did until November 25, 2002. With the passage of the Homeland Security Act of 2002 (Public Law 107-296), DHS was established to reorganize Federal law enforcement and border protection agencies into a single department. USBP was officially transferred into the Office of Border Patrol, under DHS, U.S. Customs and Border Protection (CBP), on March 1, 2003.

1.2.2 CBP Strategic Intent and Priorities

The priority mission of CBP is to prevent terrorists and terrorist weapons from entering the U.S. This priority mission involves maintaining a diverse, multi-layered approach, which includes improving security at the international borders and ports of entry (POE). It also extends the physical zone of security beyond the Nation's physical borders so that U.S. borders are the last line of defense, not the first (CBP 2003). As part of this mission, CBP has implemented its *Comprehensive Strategy to Address the Threat of Nuclear and Radiological Terrorism* to identify and seize terrorists' assets and funding sources and enhance the support infrastructure to further develop targets and analyses.

In addition to carrying out its priority mission, CBP must fulfill its traditional missions including:

- controlling the sovereign borders of the U.S. by apprehending individuals attempting to enter the U.S. illegally;
- stemming the flow of illegal drugs and other contraband;
- protecting the Nation's agriculture and economic interest from harmful pests and diseases;
- facilitating international trade;
- collecting import duties; and
- enforcing U.S. trade, immigration and other laws of the U.S. at and beyond the Nation's borders (CBP 2003).

Hereinafter, any individual, including terrorists and smugglers, who attempt to illegally enter the U.S. between POEs is referred to as an illegal alien (IA).

The mission of USBP is to strengthen the U.S. borders to prevent the entry of IAs, terrorist weapons, narcotics and other contraband. The principle objective of USBP is to apply appropriate levels of USBP personnel, intelligence, technology, and infrastructure resources to increase the level of operational effectiveness until the likelihood of apprehension is sufficient to be an effective deterrent that conveys an absolute certainty of detection and apprehension.

During recent years, USBP has significantly increased its emphasis on deterrence. Deterrence is achieved only when USBP has the ability to create and convey the immediate, credible, and absolute certainty of detection and apprehension. As such, tactical infrastructure components, such as pedestrian barriers and roads are a critical element. Trends such as the continued urbanization and industrialization of the immediate border, the recognition of environmental

preservation concerns, and the increase of criminal trans-boundary activities (including trafficking in people, drugs, and terrorism efforts) continue as a border enforcement challenge and increase the need for tactical infrastructure along the international borders.

1.2.3 Background

NPS issued a Final EA and FONSI in 2003, which addressed the construction of PVBs along the southern boundary of OPCNM (NPS 2003). The PVBs extend across the entire southern boundary of OPCNM along the U.S.-Mexico border except over Sonoyta Hill. All of the construction activities completed while building the PVBs were located within the 60-foot Roosevelt Reservation. To date, the entire 30 miles of planned PVBs have been completed by NPS. The PVBs constructed by NPS have served effectively and efficiently in deterring and hindering illegal vehicle traffic on OPCNM; however, PVBs do not deter pedestrian traffic.

1.3 LOCATION OF THE PROPOSED PROJECT

The general location of the proposed project was previously discussed in the December 2003 Final EA (NPS 2003) and is incorporated herein by reference. The project corridor is located along the U.S.-Mexico border near Lukeville, Arizona (Figure 1-1).

1.4 PURPOSE AND NEED

The purpose and need for the NPS 2003 Final EA was to prevent illegal vehicle traffic from degrading the biological resources of OPCNM as well as to protect the health and safety of Federal staff and visitors. The construction of the PVBs met the stated purpose and need of the NPS 2003 Final EA. However, since the completion of the NPS 2003 Final EA, shifts in IA traffic and recent Federal legislation has required changes in the designs of border tactical infrastructure. The purpose of the proposed primary pedestrian fence is to help CBP agents and officers gain effective control of our nation's borders.

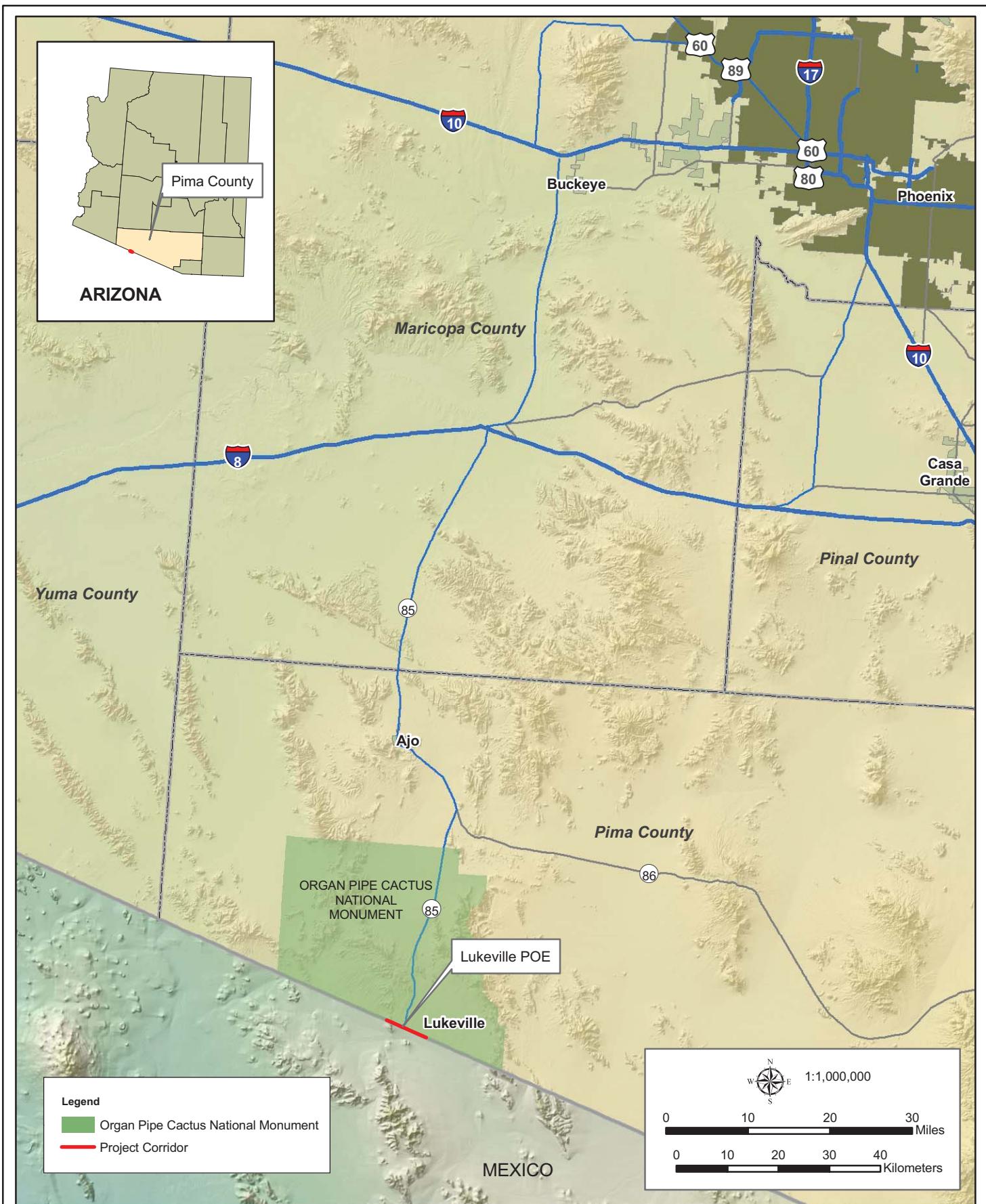


Figure 1-1: Vicinity Map

CBP is developing and deploying the appropriate mix of technology, infrastructure, and personnel. In some locations, primary pedestrian fence is a critical element of border security. In alignment with Federal mandates USBP has identified this area of the border as a location where primary pedestrian fence would contribute significantly to their priority homeland security mission. The need for the proposed action is to meet USBP operational requirements; provide a safer environment for USBP agents, NPS staff, and general public; deter IAs by constructing an impediment to northward movement into the U.S.; enhance the response time of USBP agents; and meet the mandates of Federal legislation (i.e., Secure Fence Act of 2006 and 2007 Department of Homeland Security [DHS] Appropriations Act [HR 5441]).

1.5 APPLICABLE ENVIRONMENTAL STATUTES AND REGULATIONS

The applicable environmental statutes and regulations for this EA are similar to those of the December 2003 Final EA (NPS 2003) and are hereby incorporated by reference. In summary, this EA was prepared in accordance with, but not limited to the NEPA of 1969; Endangered Species Act (ESA) of 1973, as amended; the National Historic Preservation Act (NHPA) of 1966, as amended; and the Archeological and Historical Preservation Act of 1974, as amended. In addition to these environmental statutes and regulations this EA is guided by Federal legislation, DHS's Management Directive 5100.1, Clean Air Act (CAA), Clean Water Act (CWA), Noise Control Act, Resource Conservation and Recovery Act, and Toxic Substances Control Act. Executive Orders (E.O.) bearing on the proposed action include E.O. 11988 (*Floodplain Management*), E.O. 11990 (*Protection of Wetlands*), E.O. 12088 (*Federal Compliance with Pollution Control Standards*), E.O. 12580 (*Superfund Implementation*), E.O. 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), E.O. 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*), E.O. 13101 (*Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*), E.O. 13123 (*Greening the Government Through Efficient Energy Management*), E.O. 13148 (*Greening the Government Through Leadership in Environmental Management*), E.O. 13175 (*Consultation and Coordination with Indian Tribal Governments*), and E.O. 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*).

1.6 REPORT ORGANIZATION

This report is organized into 10 major sections including this introduction. Section 2.0 describes all alternatives considered for the project. Section 3.0 discusses the environmental features potentially affected by the project, while Section 4.0 discusses the environmental consequences for each of the viable alternatives. Cumulative impacts are discussed in Section 5.0, mitigation measures are discussed in Section 6.0, and public comments and the notice of Availability (NOA) are presented in Section 7.0. Sections 8.0, 9.0, and 10.0 present a list of the references cited in the document, a list of acronyms and abbreviations, and a list of the persons involved in the preparation of this document. Appendix A contains the March 2006 Memorandum of Understanding while Appendix B is a list of state and Federal protected species for Pima County. Appendix C contains correspondence that was sent and received during the preparation of this EA. Appendix D contains the air quality calculations for the Proposed Action Alternative.

***SECTION 2.0
ALTERNATIVES***

2.0 ALTERNATIVES

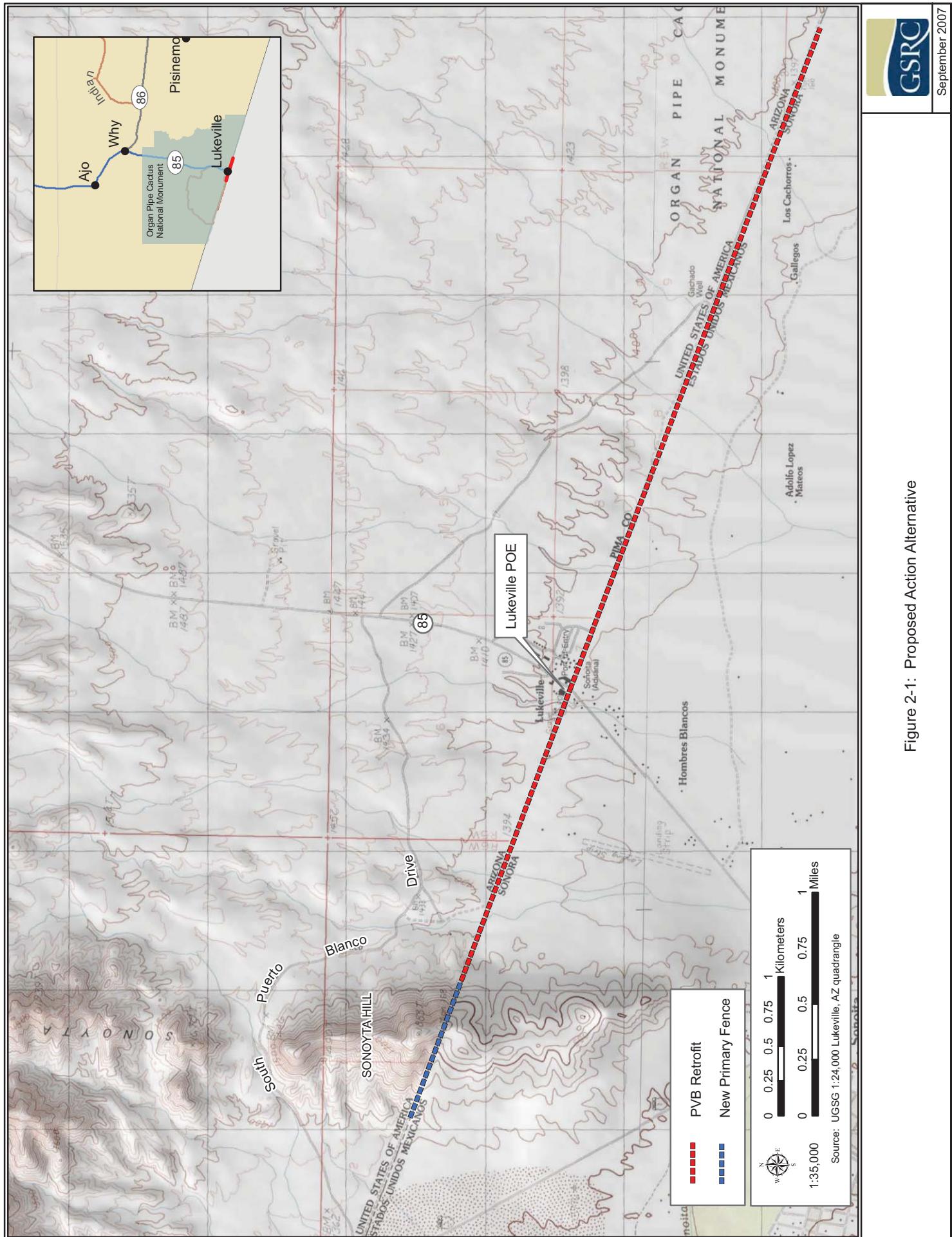
Three alternatives were identified and considered during the planning stages of the proposed project: No Action Alternative, Proposed Action Alternative, and Technology in Lieu of Tactical Infrastructure Alternative. The Proposed Action Alternative and Preferred Action Alternative are synonymous terms; however, for the purposes of this EA they will be referred to as the Proposed Action Alternative. The following paragraphs describe the alternatives considered.

2.1 NO ACTION ALTERNATIVE

Under the No Action Alternative, no construction activities would occur. The existing PVBs would continue to be maintained by NPS. The No Action Alternative does not meet the project's purpose and need, but has been carried forward for analysis, as required by CEQ regulations. The No Action Alternative will form the basis for evaluation of other action alternatives.

2.2 PROPOSED ACTION ALTERNATIVE

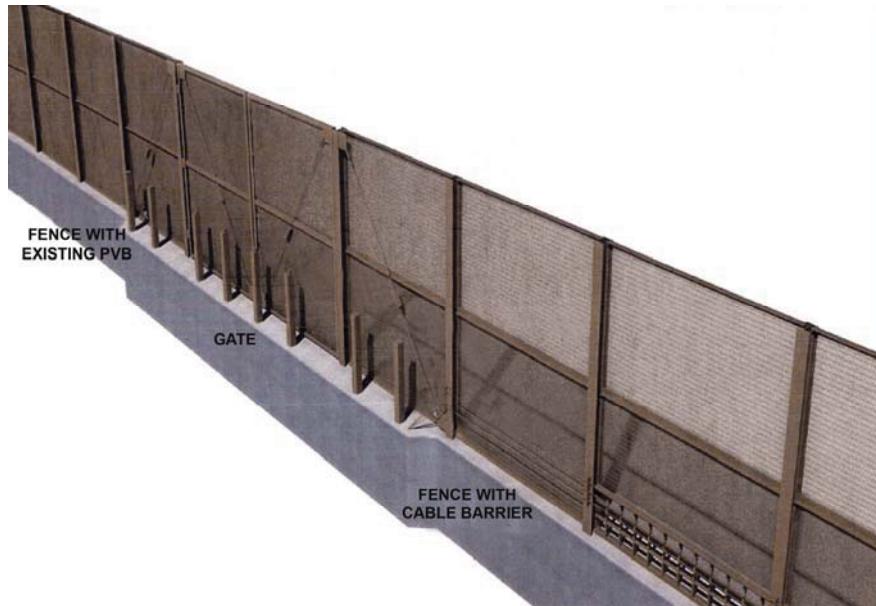
Primary pedestrian fencing has proved invaluable in denying quick access to concealment and escape opportunities for IAs inside the U.S. It performs a dual role in border security by acting as a visual deterrent and a formidable physical barrier, impeding IAs and increasing the window of time USBP agents have to respond to IAs attempting to breach the U.S.-Mexico border. The Proposed Action Alternative includes the construction and maintenance 5.2 miles of primary pedestrian fence along the U.S.-Mexico border near Lukeville, Arizona (Figure 2-1). The project corridor would extend 2.1 miles to the west and 3.1 miles to the east of the Lukeville POE. Approximately 5.2 miles of primary pedestrian fence would be constructed. Construction activities would remain within the 60-foot Roosevelt Reservation with the exception of the westernmost 0.65 miles. The westernmost 0.65 miles, which would be built over Sonoyta Hill, requires a construction footprint of 150 feet.



The primary pedestrian fence would be installed approximately 3 feet north of the existing PVBs with the exception of the Sonoya Hill portion. Due to the lack of PVBs in this area, the fence would be constructed approximately 3 feet north of the U.S.-Mexico border. An example of the mesh fence design is shown in Exhibit 2-1. This design would be used and would meet design performance measures, which dictate that the fence must:

- extend 15 to 18 feet above ground and 3 to 6 feet below ground;
- be capable of withstanding a crash of a 10,000-pound (gross weight) vehicle traveling at 40 miles per hour;
- be semi-transparent, as dictated by operational need;
- be vandal resistant;
- be designed to survive the extreme climate changes of a desert environment;
- not impede the natural flow of water; and
- allow for maintenance access to border monuments as required by the U.S. Section, International Boundary and Water Commission.

Exhibit 2-1. Example of Mesh Fence Design



Furthermore, in most washes or arroyos, the primary pedestrian fence would be designed and constructed to ensure proper conveyance of floodwaters and to eliminate the potential to cause backwater flooding on either side of the U.S.-Mexico border. CBP will remove debris from the

fence within washes/arroyos immediately after rain events to ensure that no backwater flooding occurs.

Staging areas and turnarounds would be located within the Roosevelt Reservation. Construction access would include the use of the existing patrol road adjacent to the U.S.-Mexico border as well as South Puerto Blanco Road in order to construct the primary pedestrian fence and road up and over Sonoyta Hill. Additionally, the road, existing PVBs, and primary pedestrian fence would be maintained by CBP to ensure the integrity of the road, PVBs, and primary pedestrian fence is not compromised.

2.3 OTHER ALTERNATIVES EVALUATED BUT ELIMINATED FROM CONSIDERATION

One other alternative was evaluated but eliminated from further consideration due to impediments to construction or failure to meet the purpose and need for the project. This alternative is discussed in the following subsection.

2.3.1 Technology in Lieu of Tactical Infrastructure

Under this alternative, USBP would use radar, cameras, lights, and other technology to identify illegal border crossings. The use of technology is a critical component of SBI_{net} and an effective force multiplier that allows USBP to monitor large areas and deploy agents to where they will be most effective. However, in the more populated areas within the Tucson Sector, physical barriers represent the most effective means to control illegal entry into the U.S. The use of technology alone would not provide a practical solution to achieving effective control of the border in USBP Tucson Sector. Therefore, this alternative would not meet the purpose and need as described in Section 1.4 and will not be carried forward for further analysis.

2.4 CONSTRUCTION PERSONNEL AND EQUIPMENT

Private contractors would complete the proposed construction and installation of the infrastructure components. All project personnel will not exceed a speed limit of 25 miles per hour within the OPCNM during construction and maintenance related activities. The project is expected to be completed by December 2008. Equipment staging would be located within previously disturbed areas to minimize potential effects to the environment. The equipment

anticipated to be used during the construction includes a backhoe, trencher, auger, crane, bulldozer, front-end loader, flatbed truck, water truck and roller/compactor.

2.5 SUMMARY

The two alternatives carried forward for analysis are the No Action Alternative and Proposed Action Alternative. An alternative matrix (Table 2-1) compares the two alternatives relative to the purpose and need. Table 2-2 presents a summary matrix of the impacts from the three alternatives analyzed and how they affect the environmental resources in the region.

Table 2-1. Relationship between Purpose and Need and Project

Requirements	Alternative 1: No Action Alternative	Alternative 2: Proposed Action Alternative
Provide a safer work environment for the USBP agents	PARTIALLY	YES
Deter illegal pedestrian traffic by constructing an impediment to northward movement	NO	YES
Satisfy Federal legislation	NO	YES

Table 2-2. Summary Matrix

Affected Environment	No Action Alternative	Proposed Action Alternative
Land Use	No impacts are expected.	Approximately 7 acres (0.65 mile X 90 feet) of NPS lands over Sonoyta Hill would be used as USBP infrastructure. The lands would remain as NPS lands; however, USBP would be allowed use of the 7 acres as articulated through a Special Use Permit. The remainder of the project corridor is within the Roosevelt Reservation; therefore, land use would not change in these areas. No significant impacts are expected as the indirect beneficial impacts would greatly outweigh the minor direct impacts. No significant impacts are expected as the indirect beneficial impacts would greatly outweigh the minor direct impacts.
Soils	No impacts are expected.	Up to 45 acres of soils could be permanently impacted. No prime farmlands would be impacted. Indirect impacts could occur to areas outside the project corridor. No significant impacts would occur as a result of the Proposed Action Alternative.
Vegetation	No impacts are expected.	Up to 28 acres of vegetation would be permanently altered. The remaining 17 acres of the total footprint of the project corridor are previously disturbed. The 28 acres that would be affected are comprised of vegetation communities that are regionally and locally common. Thus, no significant impacts would be expected. Indirect impacts could occur to areas outside the project corridor.
Wildlife	No impacts are expected.	If implemented, approximately 45 acres of wildlife habitat could be impacted; however, approximately 17 acres within the project corridor is previously disturbed from the construction of the existing PVBs. Therefore, no significant impacts are expected. Wildlife movement across the international boundary would be impeded within the corridor; however, these impacts would be minimal to wildlife, locally or regionally. Indirect impacts could occur to areas outside the project corridor.
Unique and Sensitive Areas	No impacts are expected.	The project footprint is primarily located within the Roosevelt Reservation. The viewshed of the OPCNM would be impacted by the construction of the primary pedestrian fence; however, once completed, the primary pedestrian fence will afford greater safety to park visitors and sensitive resources. Indirect impacts could occur as construction is ongoing or by IAs outside of the corridor if they try to circumvent the proposed infrastructure.
Wilderness	No impacts are expected	No direct impacts are expected. Indirect impacts could occur if IAs attempt to circumvent the proposed infrastructure. USBP would use the primary pedestrian fence as a force multiplier, which would all USBP to deploy agents to areas lacking infrastructure, thus, minimizing any indirect impacts.

Table 2-2, continued

Affected Environment	No Action Alternative	Proposed Action Alternative
Protected Species	No impacts are expected.	Although approximately 17 acres of the total project footprint (45 acres) have been previously disturbed due to the construction of the existing PVBs, food sources (columnar cacti) for the lesser long-nosed bat (<i>Leptonycteris curasoae yerbabuena</i>) and habitat for the Sonoran pronghorn (<i>Antilocapra americana sonoriensis</i>) would be impacted. The Proposed Action Alternative may affect and is likely to adversely affect these two species. Section 7 consultation is on-going with the U.S. Fish and Wildlife Service (USFWS); conservation measures have been identified and would be implemented to off-set impacts to the bat and pronghorn. Indirect impacts could occur to habitat or species outside of the corridor if IAs attempt to circumvent the proposed infrastructure.
Cultural Resources	No impacts are expected.	No cultural resources would be impacted either directly or indirectly.
Air Quality	No impacts are expected.	Pima County is in attainment for all criteria pollutants. Minor, temporary impacts would occur during construction but would cease upon completion of the Proposed Action Alternative.
Water Resources	No impacts are expected.	Up to 11.4 acre-feet of groundwater would be used for dust suppression and mixing concrete. All water will be trucked into the project site from sources north of the OPCNM (i.e., Why, Ajo, or Gila Bend). No deficit would occur to the region's available groundwater sources; therefore, no significant impacts to water resources would occur.
Socioeconomics	No impacts are expected.	Minor, temporary impacts could occur. Indirect beneficial impacts would occur within the region due to the reduction of IA foot traffic and the associated societal cost.
Noise	No impacts are expected.	The project corridor is located adjacent to the busy Lukleville POE; therefore, the impacts would be minimal and temporary. No significant impacts to ambient noise levels would occur.
Aesthetics	No impacts are expected.	The project footprint is located within or adjacent to previously disturbed areas. The visibility of the primary pedestrian fence from within the OPCNM would have minimal adverse impacts; however, the beneficial impacts from the reduction of IAs and associated trash would be expected to outweigh any adverse impacts. No significant impacts would occur. Indirect impacts could occur outside of the project corridor.

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SECTION 3.0
AFFECTED ENVIRONMENT

3.0 AFFECTED ENVIRONMENT

In accordance with CEQ regulations (40 CFR § 1502.15), this chapter of the EA describes the baseline environment of the area(s) that would be affected by the viable alternatives under consideration. Data and analyses are commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced. For those resources that have not changed, or where updates were not required, the discussions presented in the NPS 2003 Final EA are incorporated by reference (NPS 2003). Each of these resources is identified as such.

Resources such as prime farmlands, geology, communications, climate, and Wild and Scenic Rivers would not be impacted by this project and, thus, will not be evaluated in this EA for the following reasons:

- Prime Farmlands: There are no prime or unique farmlands in the project area.
- Geology: The construction activities proposed for this project do not include practices that would alter the geology of the area. These activities would result in negligible and localized effects to geological features, primarily due to the construction of concrete fence foundations and minimal cut and fill activities over Sonoyta Hill.
- Communications: The project would not affect communications systems in the area.
- Climate: The project would not affect nor be affected by the climate.
- Wild and Scenic Rivers: The proposed project would not affect any designated Wild and Scenic Rivers because no rivers designated as such are located within the project corridor.

3.1 LAND USE

This section was discussed in the 2003 Final EA and is incorporated herein by reference (NPS 2003). OPCNM is used for public use and recreation, species conservation, and as an International Biosphere Reserve. However, the project corridor is located within the Roosevelt Reservation along the U.S.-Mexico border. In March 2006, a Memorandum of Understanding (MOU) was established between DHS, U.S. Department of the Interior, and U.S. Department of Agriculture stating that all parties recognize that CBP operation and construction within the Roosevelt Reservation is the intended land use of the reservation (see Appendix A). Thus, land use within the majority of the project corridor is USBP infrastructure and operations. The

construction footprint over Sonoya Hill and the use of South Puerto Blanco Road are north of the 60-foot Roosevelt Reservation and would require the issuance of a Special Use Permit by the NPS.

3.2 SOILS

Soils found within the project corridor were previously discussed in the 2003 Final EA and are hereby incorporated by reference (NPS 2003). No prime farmlands are located in the project corridor. There are 7 soils series found within the project corridor, as follows:

- Antho fine sandy loam
- Gilman very fine sandy loam, saline
- Gunsight very gravelly loam, 2-15% slopes
- Harqua very gravelly loam, 0-3% slopes
- Harqua-Gunsight complex
- Lomitas very stony loam, 8-40% slopes
- Torrifluvents (wash beds)

3.3 BIOLOGICAL RESOURCES

3.3.1 Vegetation Communities

Vegetation communities within the project corridor were discussed in the 2003 NPS Final EA and are incorporated herein by reference (NPS 2003). In general, the dominant biotic community of OPCNM is the mixed Sonoran desertscrub. This community is predominantly composed of palo verde (*Cercidium* spp.), organ pipe cactus (*Stenocereus thurberi*), saguaro (*Carnegiea gigantea*), ocotillo (*Fouquieria splendens*), Sonora barrel cactus (*Ferocactus covillei*), California barrel cactus (*Ferocactus cylindraceus*), and brittlebush (*Encelia farinosa*) (INS 2001). The creosote-bursage vegetation community is the second most common vegetation community on OPCNM and is comprised of creosotebush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), and triangle-leaf bursage (*Ambrosia deltoidea*) (NPS 2003). Saltbush (*Atriplex* sp.) is common throughout most of the project corridor, especially east of the Lukeville POE (Baiza 2007).

3.3.2 Wildlife

A detailed discussion of wildlife resources was presented in the 2003 NPS Final EA and is incorporated herein by reference (NPS 2003). In summary, a large diversity of animal species

are known to occur on OPCNM; these species include 55 mammals, 277 bird species, 48 reptiles and amphibians, one fish and two invertebrates. Many of the wildlife species found on OPCNM are obligate desert species; however, the riparian habitat available at Quitobaquito and Aquajita Springs support some aquatic species such as the Sonoran toad (*Bufo alvarius*) and Quitobaquito pupfish (*Cyprinodon macularius*).

3.3.3 Non-Native and Invasive Species

Non-native vegetation was previously discussed in the 2003 Final EA and is incorporated herein by reference (NPS 2003). Although the OPCNM has a minimal amount of non-native or invasive species in relation to the overall habitat area, these species have become a major problem in certain areas. One such area is Quitobaquito Springs. The common non-native species observed on the OPCNM include buffelgrass (*Pennisetum ciliare*), blue panic (*Panicum antidotale*), and ice plants (*Mesambryanthemum* sp.). More specifically, the common non-native plant located in the project corridor is Bermuda grass (*Cynodon dactylon*) (Baiza 2007).

3.4 UNIQUE AND SENSITIVE AREAS

Southwestern Arizona has many unique and sensitive areas. Ongoing efforts by many government agencies, as well as private entities, have set aside areas for preservation. These areas are intended for use by the public in hopes of better understanding the myriad of biological and physical systems exhibited in their natural state. The unique or sensitive areas located within or near the project corridor are discussed below.

Organ Pipe Cactus National Monument

OPCNM was established in 1937 by President Franklin D. Roosevelt to “celebrate the life and landscape of the Sonoran desert” (Desert USA 2004a). In 1976, the United Nations designated OPCNM as an International Biosphere Reserve; it is an almost pristine example of the Sonoran Desert (NPS 2005). In OPCNM, three distinctive desert habitats (i.e., desert wilderness, vast mountain ranges, and plains) converge within 500 square miles, representing diverse plant communities (Desert USA 2004b). OPCNM encompasses approximately 330,000 acres, of which 312,600 acres, or 94 percent, are designated as Wilderness Area (NPS 2004). With 26 species of cacti, OPCNM exhibits an extraordinary collection of plants of the Sonoran desert, including the organ pipe cactus, which is rarely found in the U.S. (NPS 2004). Within the project corridor lies components (i.e., xeroriparian areas and rocky hillsides) that make up the Sonoran Desert

ecosystem for which the OPCNM was set aside to preserve. These components are common throughout the Sonoran Desert, although the concentrations of certain Sonoran Desert species (e.g., organ pipe, senita) are higher within the OPCNM.

Cabeza Prieta National Wildlife Refuge (CPNWR)

CPNWR shares 56 miles of border with Sonora, Mexico, and is home to seven mountain ranges (USFWS 2002, Defenders of Wildlife 2004). CPNWR, established in 1939 to conserve natural wildlife resources (e.g., desert bighorn sheep [*Ovis canadensis mexicana*]), occupies 860,010 acres and is the third largest National Wildlife Refuge in the contiguous 48 states (USFWS 2002, 2005). The Arizona Desert Wilderness Act of 1990 designated over 90 percent (approximately 799,000 acres) of CPNWR as Wilderness Area making it the largest Wilderness Area in the state of Arizona (Arizona Wilderness Coalition 2004). CPNWR supports more than 391 plant species and 300 wildlife species, including the Federally listed Sonoran pronghorn (*Antilocapra americana sonoriensis*) (USFWS 2002). The refuge is characterized by creosote and bursage flats, ocotillo, western honey mesquite (*Prosopis glandulosa*), palo verde, ironwood (*Olneya tesota*), and an abundance of cacti, including cholla (*Opuntia* spp.) and saguaro.

Barry M. Goldwater Range (BMGR)

BMGR, established in 1941 as an aerial gunnery and bombing range, lies to the north and west of the project corridor and CPNWR. BMGR is a 1.7 million acre military tactical aviation training area with 57,000 cubic miles of restricted airspace. It is the second largest range within Department of Defense, and at one time over 2.7 million acres were set aside for the range. Within the boundaries of BMGR, at least 100 important cultural resource sites have been identified, three BLM designated areas of critical environmental concern, and the Flat-tailed Horned Lizard Management Area (BMGR Visitor Information Brochure, n.d.). The “southern westernmost” boundary of BMGR shares approximately 37 miles with the U.S.-Mexico border (U.S. Department of Air Force *et al.* 2006).

The Tohono O’odham Nation

Tohono O’odham Nation (TON) is comprised of four non-contiguous areas (Inter Tribal Council of Arizona 2003). The largest of the four areas within TON is located east of the project corridor. This area stretches 70 miles across the U.S.-Mexico border and occupies 2,773,357 acres. The total population of TON was 23,750 in 1999 (Arizona Department of Commerce 2004). The town

of Sells serves as the Nation's capital and other small, scattered villages are located within TON. Members of the Nation live in both the U.S. and Mexico.

3.5 WILDERNESS

The Wilderness Act of 1964 allowed for the establishment of a National Wilderness Preservation System. The act allows for the establishment of wilderness on Federally owned lands designated by Congress. Areas designated as wilderness are to be administered for the use and enjoyment of the public in such a manner as to leave the lands undisturbed for future use and enjoyment as wilderness, and to provide protection of these areas, and the preservation of their wilderness character. To maintain the wilderness characteristics of designated wilderness areas certain activities are prohibited and include permanent roads (except as necessary to meet minimum requirements for administration of the area, including measures required for emergencies involving human health and safety), temporary roads, motor vehicles, motorized equipment, motorboats, landing of aircraft, any form of mechanical transport, and structures (16 United States Code [U.S.C.] 1121 [note], 1131-1136).

In furtherance of the purpose of the Wilderness Act of 1964, the Arizona Desert Wilderness Act of 1990 was established to provide for the designation of certain public lands as wilderness in the state of Arizona (Public Law 88-577, found in 16 U.S.C. 1131-1136). There are no designated wilderness areas within the project corridor. However, most of OPCNM beginning 150 feet north of South Puerto Blanco Road is designated as Wilderness.

3.6 PROTECTED SPECIES AND CRITICAL HABITATS

3.6.1 Federal

An in-depth discussion of this resource was presented in the 2003 NPS Final EA and is incorporated herein by reference (NPS 2003). Within Pima County, 13 species are listed as Federally endangered, two are Federally threatened, one has been proposed for endangered status and three for candidate species (Table 3-1). Not all of these species occur within the vicinity of the project corridor; however, several have the potential to occur within or near the project corridor. These include the lesser long-nosed bat, Sonoran pronghorn and the Acuna cactus (*Echinomastus erectocentrus* var. *acuñensis*).

Table 3-1. Federally Listed and Proposed Species Potentially Occurring Within Pima County, Arizona

Common/Scientific Name	Federal/State Status	Habitat	Potential to Occur within or near Project Corridor
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Candidate	Large blocks of riparian woods.	No – No suitable habitat.
Masked bobwhite (<i>Colinus virginianus ridgewayi</i>)	Endangered	Desert grasslands with diversity of dense native grasses, forbs, and brush.	No – Presently only known to occur on Buenos Aires NWR.
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	Endangered	Cottonwood/willow and tamarisk vegetation communities along river and streams.	No – No suitable habitat.
California brown pelican (<i>Pelecanus occidentalis californicus</i>)	Endangered	Coastal lands and islands, also found around lakes and rivers inland.	No – No suitable habitat.
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	Threatened	Nests in canyons and dense forests with multi-layered foliage structure.	No – No suitable habitat.
Sonoran pronghorn (<i>Antilocapra americana sonoriensis</i>)	Endangered	Broad intermountain alluvial valleys with creosote-bursage and palo verde-mixed cacti associations. Current distribution known to occur on the CPNWR.	Yes- Species present on CPNWR and OPCNM.
Ocelot (<i>Leopardus pardalis</i>)	Endangered	Dense, thorny chaparral communities and cedar breaks.	No – No suitable habitat.
Lesser long-nosed bat (<i>Leptonycteris curasoae yerbabuenae</i>)	Endangered	Desertscrub habitat with agave and columnar cacti present as food plants.	Yes – Potential foraging habitat present.
Jaguar (<i>Panthera onca</i>)	Endangered	Found in Sonoran desertscrub up through subalpine conifer forest.	No – Extirpated from the area.
Sonoyta mud turtle (<i>Kinosternon sonoriense longifemorale</i>)	Candidate	Occurs in pond and streams; however, it is restricted to Quitobaquito Springs and nearby stream habitat.	No – Known to occur at Quitobaquito Springs, but outside of project corridor.
Chiricahua leopard frog (<i>Rana chiricahuensis</i>)	Threatened	Streams, rivers, ponds, backwaters, and stock tanks that are mostly free from exotic species at elevations ranging from 1,200 to 4,000 feet.	No – No suitable habitat.
Quitobaquito pupfish (<i>Cyprinodon macularius</i>)	Endangered	Shallow springs, small streams, and marshes. Tolerant of saline and warm water.	No – Critical Habitat designated within the OPCNM at Quitobaquito Springs and Pond, but outside of the project corridor.
Gila chub (<i>Gila intermedia</i>)	Proposed Endangered	Pools, springs, ciénegas, and streams within the Gila River system.	No – Known populations occur within the Gila River drainage.
Gila topminnow (<i>Poeciliopsis occidentalis occidentalis</i>)	Endangered	Small streams, springs, and ciénegas within the Gila River system.	No – Known populations occur within the Gila River drainage.
Kearney blue star (<i>Amsonia kearneyana</i>)	Endangered	West-facing drainages in the Baboquivari mountains.	No – Project corridor west of Baboquivari Mountains.
Pima pineapple cactus (<i>Coryphantha scheeri var. robustispina</i>)	Endangered	Ridges in semi-desert grassland and alluvial fans in Sonoran desertscrub with elevation ranges from approximately 2,300 to 5,000 feet.	No – Known populations occur in east Pima County at high elevations.

Table 3-1, continued

Common/Scientific Name	Federal/State Status	Habitat	Potential to Occur within or near Project Corridor
Nichol Turk's head cactus (<i>Echinocactus horizonthalonius</i> var. <i>nicholii</i>)	Endangered	Unshaded microsites in Sonoran desertscrub on dissected limestone mountains.	No – Known populations occur in east Pima and south Pinal counties.
Huachuca water umbel (<i>Liaeopsis schaffneriana</i> var. <i>recurva</i>)	Endangered	Cienegas, perennial low gradient streams, wetlands.	No – Known populations found in San Pedro River Basin.
Acuña cactus (<i>Sclerocactus erectocentrus</i> Synonym: <i>Echinomastus erectocentrus</i> var. <i>acunensis</i>)	Candidate	Acuña cacti are found on granite substrates on rounded small hills at elevations ranging from 1,300-2,000 feet.	Yes – Potential to occur, known populations are located on OPCNM approximately 8 miles north of the U.S.-Mexico border.

Source: USFWS 2007.

3.6.1.1 Sonoran Pronghorn

The Sonoran pronghorn was listed as Federally endangered on March 11, 1967 (32 Federal Register [FR] 4001), and is currently recognized as one of five subspecies of pronghorn (USFWS 1998). Sonoran pronghorn range from the plains of central and western Sonora, Mexico north to southwestern Arizona (USFWS 2003). In Arizona, Sonoran pronghorn occur on the CPNWR, the BMGR, and OPCNM, from State Route 85 west to the Cabeza Prieta Mountains and from the vicinity of the Wellton-Mohawk Canal south to the U.S.-Mexico border (Figure 3-1). Although, the Sonoran pronghorn is known to inhabit the OPCNM west of State Route 85, the likelihood of encountering a Sonoran pronghorn within the project corridor is limited because Mexico Highway 2 is near the project corridor, the existing barbed wire fence, and human activity near Sonoyta, Mexico. All of these elements are considered an impediment to pronghorn movement (NPS 2003).

3.6.1.2 Lesser Long-nosed Bat

The lesser long-nosed bat was listed as endangered on September 30, 1988 (53 FR 38456). Lesser long-nosed bats are a nectar, pollen, and fruit eating species that migrates into southern New Mexico and Arizona seasonally from Mexico (Arizona Game and Fish Department [AGFD] 2003). Lesser long-nosed bats migrate starting in early April, apparently following the flowering of columnar cacti and desert agave (*Agave deserti simplex*), returning to Mexico during September (USFWS 1995). A total of 206 saguaro and 295 organ pipe cacti were observed within the survey corridor during the field surveys. It should be noted that over 85 percent of the columnar cacti observed within the project corridor were located within the 0.65 miles across Sonoyta Hill.

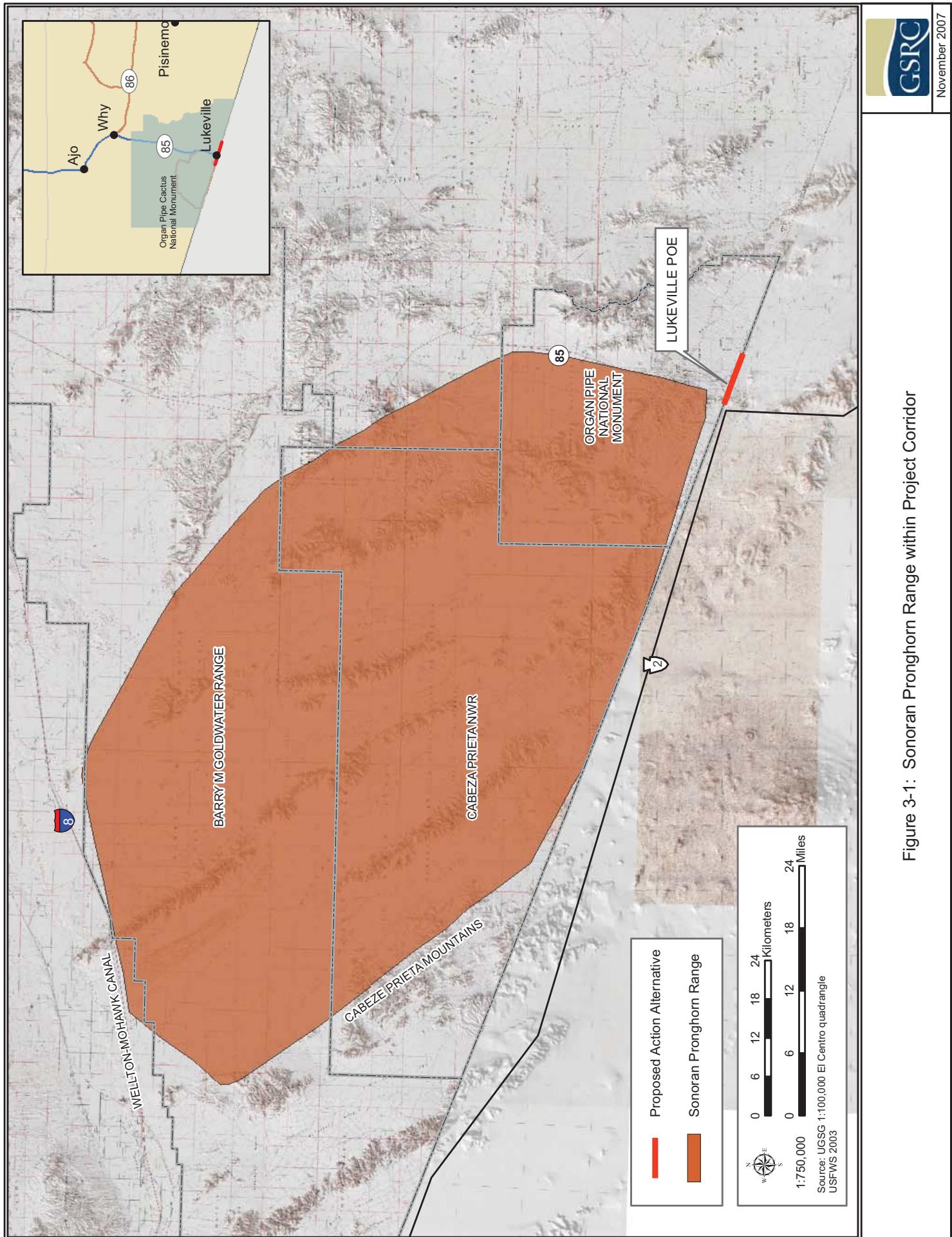


Figure 3-1: Sonoran Pronghorn Range within Project Corridor

The lesser long-nosed bat is found during the summer within desert grasslands and scrublands. The lesser long-nosed bat spends the day in caves and tunnels and forages at night upon plant nectar and pollen. This bat is an important pollinator of agave, and organ pipe and saguaro cacti (AGFD 2003). Roosting occurs in caves, abandoned buildings, and mines, which are usually located at the base of mountains where food sources are present (AGFD 2003). The lesser long-nosed bat is a seasonal resident of the OPCNM. Roosting sites are located in the OPCNM, but no known roosting sites occur within the project corridor (NPS 2003). The closest location of a known maternity colony to the project corridor would be approximately 15 miles (NPS 2003).

3.6.1.3 Acuña Cactus

The candidate status of Acuña cactus was last reviewed on May 11, 2005 (70 FR 24870). Seven populations of Acuña cactus are currently known to exist (Baiza 2007). The species is restricted to well drained knolls and gravel ridges between major washes on substrates, including granite hills and flats and bright red to white andesite, occurring from 1,300 to 2,000 feet in elevation (AGFD 2004). The species requires insect vectors for pollination, with polylectic bee species being the primary agent (AGFD 2004). Dispersal occurs primarily through gravity, and secondarily by wind, rain, and small insects.

As a candidate species, the Acuña cactus is not Federally protected, but is protected by the Arizona's Native Plant Law. Consideration is given to candidate species because of the potential for their listing during project activities, which could require USFWS Section 7 consultation. Although the Acuña cactus is known to inhabit the OPCNM, the known population is outside of the project corridor (approximately 8 miles north of U.S.-Mexico border) and no specimens were found within the project corridor during recent field surveys.

3.6.2 State

Suitable habitat for state sensitive species exists within the project corridor. All of the faunal species listed in Table 3-1 have a state-sensitive designation of Wildlife of Special Concern (WSC). State protected species (i.e., WSC) potentially found in the project corridor that are not Federally protected include the Great Plains narrow mouthed toad (*Gastrophryne olivacea*), cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*), Sonoran desert tortoise (*Gopherus agassizii*), California leaf-nosed bat (*Macrotus californicus*), Mexican rosy boa (*Charina trivirgata trivirgata*), and tropical kingbird (*Tyrannus melancholicus*). The Sonoran

desert tortoise and the Mexican rosy boa have the potential to exist near Sonoyta Hill within the project corridor. A complete list of state and Federal protected species for Pima County is included in Appendix B.

3.6.3 Critical Habitat

The Quitobaquito pupfish (*Cyprinodon macularius*) is the only species near the project corridor which has designated critical habitat. The critical habitat includes the Quitobaquito Springs and pond, and a 100-foot riparian buffer (USFWS 1986). Although the Quitobaquito pupfish critical habitat is located within the OPCNM, it is approximately 10.5 miles west of the project corridor.

3.7 CULTURAL RESOURCES

The NHPA of 1966 establishes the Federal government's policy to provide leadership in the preservation of historic properties and to administer Federally owned or controlled historic properties in a spirit of stewardship. Section 106 of the NHPA of 1966, as amended, requires Federal agencies to identify and assess the effects of their undertakings on cultural properties included in or eligible for inclusion in the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation (AHP) a reasonable opportunity to comment on such undertakings. Federal agencies must consult with the appropriate state and local officials, Indian tribes, applicants for Federal assistance, and members of the public and consider their views and concerns about historic preservation issues. The AHP is authorized to promulgate such rules and regulations as it deems necessary to govern the implementation of Section 106 in its entirety. Those regulations are contained in the Code of Federal Regulations as 36 CFR Part 800, "Protection of Historic Properties".

Several other important pieces of legislation include the Archeological Resources Protection Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA), along with EO 13007 and EO 13175. ARPA strengthened the permitting procedures required for conducting archeological fieldwork on Federal lands, originally mandated by the Antiquities Act. It also established more rigorous fines and penalties for unauthorized excavation on Federal land. NAGPRA mandates Federal agencies to summarize, inventory, and repatriate cultural items in the possession of or control of the Federal agency to lineal descendants or to culturally affiliated Federally recognized Indian tribes. NAGPRA also requires that certain procedures be followed when there is an intentional excavation of or an inadvertent discovery of human remains. EO

13007 was issued on May 24, 1996 in order to facilitate the implementation of the American Indian Religious Freedom Act of 1978. It specifically charges Federal agencies to: (1) accommodate, to the extent practical, American Indian access to and use of sacred sites by religious practitioners; (2) avoid adversely affecting the physical integrity of sacred sites; and (3) to maintain the confidentiality of these sites. E.O. 13175 outlines the official U.S. government policy on consultation and coordination with American tribal governments. The order emphasizes formal recognition of the American Indian Tribes' status as...“domestic independent nations” that have entered into treaties with the U.S. guaranteeing their right to self-government. It stipulates that this consultation would be done on a “government to government basis.”

3.7.1 Cultural History

The archaeology of southern Arizona is relatively complex considering the various geographic and related cultural features. The OPCNM lies within a cultural area known as the Western Papaguería, which includes the region bounded by the Colorado River to the west, the Gila River to the north, the TON to the east, and Puerto Peñasco, Sonora, Mexico to the south (USFWS 2001). The cultural history of OPCNM can be divided into five periods:

Period	Dates
Preceramic	10,000 B.C. to A.D. 200
Ceramic	A.D. 200 to 1500
Early Historic	A.D. 1540 to 1848
Late Historic	A.D. 1848-1945
World War II and Cold War	A.D. 1945-1989

Source: USFWS 2001

3.7.2 Previous Investigation

A cultural resources survey was conducted in 2002 for the proposed construction of vehicle barriers along the U.S.-Mexico Border with the OPCNM. The survey corridor consisted of a 100 foot survey corridor along the international border within the OPCNM. The survey identified seven cultural resources that would be potentially impacted by the proposed vehicle barriers (NPS 2003).

3.7.3 Current Investigation

A site records check and cultural resources survey was conducted for the construction footprint of the Proposed Action Alternative. Three previously recorded historic objects, International Boundary Monuments 166, 167, and 168 were relocated during the current surveys. The International Boundary Monuments are listed on the NRHP and are considered significant

cultural resources. In addition, one previously recorded archaeological site, the Gachado Well and Line Camp (AZ C:1:17[ASM]) was also relocated and mapped during the current survey. This archaeological site is also listed on the NRHP and is considered a significant cultural resource. It should be noted that the Gachado Well and Line Camp, however, are not located within the 60-foot wide project corridor (Tuomey 2007).

3.8 AIR QUALITY

A detailed discussion of air quality conditions was presented in the 2003 NPS Final EA and is incorporated herein by reference (NPS 2003). Pima County is classified as being in attainment for all criteria pollutants under the National Ambient Air Quality Standards (NAAQS) (Pima County Department of Environmental Quality [PCDEQ] 2007).

According to 40 CFR 51.853(b), Federal actions require a Conformity Determination for each pollutant where the total of direct and indirect emissions in a non-attainment or maintenance area caused by a Federal action would equal or exceed any of the rates in paragraphs 40 CFR 51.853(b)(1) or (2). If emissions from a Federal action do not exceed *de minimis* thresholds, and if the Federal action is not considered a regionally significant action, it is exempt from further conformity analysis. Therefore, because Pima County is in attainment for all criteria pollutants and because any alternative chosen would not exceed *de minimis* thresholds, a conformity analysis is not warranted (see Section 4.8.2).

3.9 WATER RESOURCES

A detailed discussion of this resource was presented in the 2003 NPS Final EA and is incorporated herein by reference (NPS 2003). Surface waters on OPCNM are limited as water availability varies seasonally with the majority of rainfall occurring in late summer. Section 404 of the CWA of 1977 (PL 95-217) authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill material into waters of the U.S., including wetlands. Any area that meets these criteria is commonly classified as "Waters of the U.S." Waters of the U.S. are further defined as all other waters such as intrastate lakes, rivers, streams, mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, natural ponds, or impoundments of waters, tributaries of waters, and territorial seas. Activities that result in the dredging and/or filling of jurisdictional Waters of the U.S., including wetlands, are

regulated under Section 404 of the CWA. There are 16 intermittent streams which cross the project corridor; however, there are no perennial streams on OPCNM (NPS 2003). Wetlands are sparse on OPCNM and are limited to those areas with perennial water flow such as Quitobaquito Springs and Aquajito Springs. Both of these wetland areas are outside of the project corridor and would not be impacted (NPS 2003).

The project corridor is within the Western Mexican Drainage Basin (WMDB), which covers approximately 730 square miles in southern Arizona (INS 2001). The WMDB is similar in structure to the surrounding Basin and Range Province basins that are characterized by broad alluvium-filled valleys dissected by elongated mountain ranges. The Arizona Department of Water Resources (ADWR) estimated that in 1988 approximately 4.1 million acre-feet of groundwater was stored at a depth of 1,200 feet below the land surface (ADWR 2005, INS 2001). The annual recharge rate for the WMDB is 2,400 acre-feet per year (Leake 2005). In 1985, the ADWR estimated approximately 220 acre-feet of water was withdrawn from the WMDB (ADWR 2005). Since the recharge rate far exceeds the withdrawal rate, the WMDB currently provides ample groundwater supply for the current users.

The Lower Gila River Basin is situated north of the WMDB and OPCNM, within this basin, groundwater occurs in both floodplain and basin fill deposits. Streambed or floodplain deposits (consisting of sand, gravel, cobbles, and boulders) range from approximately 10 ft thick in the smaller drainages to as much as 110 ft thick in the Gila River floodplain (Babcock *et al.* 1947). The basin fill deposits may be divided into three separate units; the upper sandy unit, a middle fine-grained unit, and a lower coarse-grained unit (ADWR 2004). These units vary in thickness and may not be present at all locations. Groundwater recharge is from infiltration of rainfall runoff and underflow from groundwater basins that are hydraulically up gradient (Weist 1965). The groundwater for the construction of the proposed project would come from within this basin and more than likely from the town of Why or Ajo, Arizona. Because much of the land surrounding the towns of Ajo and Why is undeveloped public land and the need for water in the region is limited to the populated areas, the municipal wells often maintain high water levels (Tibbits 2004).

Pursuant to the National Flood Insurance Act of 1968, as amended (42 USC 4001 et seq.), and the Flood Disaster Protection Act of 1973 (P.L. 93-234, 87 Stat. 975), EO 11988, floodplain management requires that each Federal agency take actions to reduce the risk of flood loss,

minimize the impact of floods on human safety, health and welfare, and preserve the beneficial values which floodplains serve. EO 11988 requires that agencies evaluate the potential effects of actions within a floodplain and avoid floodplains unless the agency determines that there is no practicable alternative. Where the only practicable alternative is to site in a floodplain, a planning process is followed to ensure compliance with EO 11988. In summary, this process includes the following steps:

- determine whether or not the action is in the regulatory floodplain;
- conduct early public notice;
- identify and evaluate practicable alternatives, if any;
- identify the impact of the action;
- minimize the impact;
- reevaluate alternatives;
- present the findings and a public explanation; and
- implement the action.

This process is further outlined on the FEMA's Environmental Planning and Historic Preservation Program Web site (FEMA 2006). As a planning tool, the NEPA process incorporates floodplain management through analysis and public coordination, ensuring that the floodplain management planning process is adhered to. In addition, floodplains are managed at the local municipal level through the assistance and oversight of FEMA. According to FEMA Map Panel number 0007643050B, approximately 550 feet of the project corridor is located within the 100-year floodplain. This area is located immediately west of the Lukeville POE.

3.10 SOCIOECONOMICS

The socioeconomic environment for the Region of Influence (ROI), Pima County, was described in the 2003 Final EA and is herein incorporated by reference (NPS 2003). The population of Pima County in 2006 was estimated at 902,720 (U.S. Census Bureau 2005). The 2005 racial mix of Pima County was predominantly Caucasian (71.1 percent), followed by American Indians and Alaskan Natives (3.2 percent), African Americans (2.9 percent) and Asian persons (2.4 percent), with the remaining 20.4 percent of the population reporting other races (U.S. Census Bureau 2005). Persons of any race can claim Hispanic or Latino origin; 32 percent of the 2005 population of Pima County claim to be of Hispanic or Latino origin (U.S. Census Bureau 2005). The total number of jobs in Pima County in 2005 was 486,165, an increase of 26 percent over the number of jobs in 1995 (384,604; Bureau of Economic Analysis [BEA] 2005). The 2005 annual average unemployment rate for Pima County was 4.6 percent (Arizona Department of

Commerce 2005). This is lower than the 4.7 percent average annual unemployment rate for the state of Arizona (Arizona Department of Commerce 2005).

In 2005, Pima County had a per capita personal income (PCPI) of \$28,869. This PCPI ranked 2nd in the state of Arizona, and was 96 percent of the state average of \$30,019, and 84 percent of the National average of \$34,471. Total personal income (TPI) for Pima County in 2005 was \$26.7 billion.

3.10.1 Environmental Justice

E.O. 12898 (Federal Actions to Address Environmental Justice in Minority and Low-Income Populations) was signed in February 1994. This order was intended to direct Federal agencies "...to make achieving environmental justice part of its mission by identifying and addressing... disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the [U.S.]..." To comply with the E.O., minority and poverty status in the vicinity of the project was examined to determine if any minority and/or low-income communities would potentially be disproportionately affected by implementation of the Proposed Action Alternative. Both low-income and minority populations are prevalent within the ROI. No residential areas exist in or near the project corridor in the U.S. However, developed areas (i.e., residential) are located adjacent to the project corridor in Sonoyta, Mexico.

3.10.2 Protection of Children

E.O. 13045 requires each Federal agency "to identify and assess environmental health risks and safety risks that may disproportionately affect children", and "ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks". This E.O. was prompted by the recognition that children, still undergoing physiological growth and development, are more sensitive to adverse environmental health and safety risks than adults. The potential for impacts to the health and safety of children is greater where projects are located near residential areas. No residential areas exist in or near the project corridor in the U.S. However, developed areas (i.e., residential) are located adjacent to the project corridor in Sonoyta, Mexico.

3.11 NOISE

Noise is generally described as unwanted sound, which is identified by either objective effects (hearing loss, damage to structures, etc.) or subjective judgments (community annoyance). Sound is represented on a logarithmic scale with a unit called the decibel (dB). Sound on the decibel scale is referred to as a sound level. The threshold of human hearing is approximately 0 dB, and the threshold of discomfort or pain is around 120 dB.

Sound levels are computed over a 24-hour period and adjusted for nighttime annoyances to produce the day-night average sound level (DNL). DNL is the community noise measurement recommended by the U.S. Environmental Protection Agency (EPA) and has been adopted by most Federal agencies (EPA 1974). A-weighted decibels (dBA) are used to express the relative loudness of sounds in air as perceived by the human ear (Generac Power Systems, Inc. 2004). A-weighting is necessary to compare the effects of sounds on the human body, because the human ear is less sensitive at low frequencies than at high frequencies. A DNL of 65 dBA is most commonly used for noise planning purposes, and represents a compromise between community impact and the need for activities like construction. Areas exposed to DNL above 65 dBA are generally not considered suitable for residential use. A DNL of 55 dBA was identified by EPA as a level below which there are effectively no adverse impacts (EPA 1974).

Noise levels surrounding the project corridor are variable depending on the time of day and climatic conditions. The construction activities potentially causing elevated noise levels within the project corridor would include diesel and gasoline powered generators, trucks, and construction equipment.

Heavy duty trucks generate a noise level of approximately 90 dBA. Attenuation to 55 dBA occurs at a distance of approximately 2,600 feet depending on climatic conditions, topography, vegetation, and man-made barriers (Generac Power Systems, Inc. 2004). Noise levels for other types of construction equipment range from the loudest, tractors and backhoes (70 to 95 dBA) to pumps and generators (65 to 85 dBA) (Bugliarello *et al.* 1976). The Lukeville POE is a busy port with continuous traffic during its hours of operation. Therefore, noise generated near the POE is expected to be elevated due to the operation of the POE and associated traffic. The OPCNM and its associated Wilderness Area as well as the residences in Mexico are considered sensitive noise receptors and are located near the project corridor.

3.12 AESTHETICS

Aesthetic resources consist of the natural and man-made landscape features that appear indigenous to the area and give a particular environment its visual characteristics. The major visual characteristic of southern Arizona lies in its vast areas of naturally occurring landscape, tranquil dark skies, and scenic mountain ranges. The project corridor is located near Sonoyta, Mexico and the town of Lukeville, Arizona (i.e., Lukeville POE). OPCNM and its associated Wilderness Areas are located adjacent to the project corridor and are visited for recreational purposes, natural settings, and aesthetic values. However, the project corridor currently has a limited aesthetic value due to the disturbed nature of the project footprint, existing PVBs and chain link fence, illegal trails, trash (Photograph 3-1), Sonoyta, Mexico (Photograph 3-2), and Lukeville POE (Photograph 3-3).



Photograph 3-1. Trails and trash left by IAs near Lukeville, Arizona POE.



Photograph 3-2. View of Sonoyta, Mexico residential areas from U.S. Border near Lukeville, Arizona.



Photograph 3-3. Lukeville, Arizona-Sonoyta, Mexico POE.

3.13 WASTE

3.13.1 Hazardous Waste

EPA's mission is to protect humans and the environment and work to develop and enforce regulations that implement environmental laws enacted by Congress (from such legislation as the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980). The EPA maintains a list of hazardous waste sites, particularly waste storage/treatment facilities or former industrial manufacturing sites in the U.S. The chemical contaminants released into the environment (air, soil or groundwater) from hazardous waste sites may include heavy metals, organic compounds, solvents and other chemicals. The potential adverse human health impact of hazardous waste sites is a considerable source of concern to the general public, as well as government agencies and health professionals.

EPA databases, Environmental and Compliance History Online and Envirofacts Data Warehouse, were reviewed for the locations of hazardous waste sites within or near the proposed project corridor (EPA 2007a, 2007b). According to both of these databases, no hazardous waste sites are located near or within the project corridor.

3.13.2 Unregulated Solid Waste

Unregulated solid waste within OPCNM has become a severe problem in recent years due to illegal vehicle and foot traffic. According to the Ninth Report of the Good Neighbor Environmental Board (GNEB) to the President and Congress of the U.S., the average IA disposes of approximately 8 pounds of waste a day. This waste consists of backpacks, clothing, blankets, water bottles, plastic sheeting, food, and other debris (GNEB 2006). Within the project area these forms of unregulated solid waste are the most commonly observed.

SECTION 4.0
ENVIRONMENTAL CONSEQUENCES

4.0 ENVIRONMENTAL CONSEQUENCES

In accordance with CEQ regulations (40 CFR § 1502.16), this section of the EA addresses potential impacts to the affected environment within the project corridor for the two alternatives outlined in Section 2 of this document. An impact (consequence or effect) is defined as a modification to the human or natural environment that would result from the implementation of an action. The impacts can be either beneficial or adverse, and can be either directly related to the action or indirectly caused by the action. The effects can be temporary, short-term, long-term or permanent. For purposes of this EA, temporary effects are defined as those that would occur during construction or immediately after construction; short-term impacts would last less than 3 years after completion of the action. Long-term impacts are defined as those that would last 3 to 10 years. Permanent impacts would indicate an irretrievable loss or alteration of resources.

Impacts can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. The significance of the impacts presented in this EA is based upon existing regulatory standards, scientific and environmental knowledge, and best professional opinions. Significant impacts are those effects that would result in substantial changes to the environment (as defined by 40 CFR 1500-08) and should receive the greatest attention in the decision making process.

This EA describes the potential permanent impacts assuming that the entire 60-foot Roosevelt Reservation and 150-foot project footprint over Sonoyta Hill would be disturbed. It is also assumed that within the construction footprint any impacts would be permanent. Therefore, the permanent impacts described for the Proposed Action Alternative would total approximately 45 acres (12 acres within 150-foot wide footprint and 33 acres the within 60-foot wide footprint).

Other assumptions were also made in this EA regarding the primary pedestrian fence. It was assumed that in order to build the road and fence would require a range of 5.2 to 11.4 acre-feet (1.7 million gallons to 3.7 million gallons) of water for the concrete footer and dust suppression.

One acre-foot is equivalent to 325,000 gallons of water. The primary pedestrian fence would require, as needed, maintenance activities to be performed by USBP that would be mostly limited to minor patchwork repairs and standard maintenance operations. These maintenance activities would not result in significant impacts to the natural or human environment.

The following discussions describe and, where possible, quantify the potential effects of each alternative on the resources within or near the project corridor. All impacts described below are considered to be adverse unless stated otherwise.

4.1 LAND USE

4.1.1 Alternative 1: No Action Alternative

Under the No Action Alternative, no infrastructure proposed as part of this project would be constructed. Although land use would not change, IA pedestrian traffic on OPCNM would continue and potentially increase with the implementation of other border enforcement activities along the southwest border.

4.1.2 Alternative 2: Proposed Action Alternative

The majority of the project corridor is within the Roosevelt Reservation. However, some of the project corridor (i.e., 7 acres) over Sonoyta Hill is not within the Roosevelt Reservation and would be used for USBP infrastructure maintenance and enforcement operations. A Special Use Permit articulating USBP's use of the 7 acres would be obtained from the NPS prior to construction, since the area would remain under NPS's management. The use of 7 acres represents less than 0.002 percent of the total OPCNM.

Indirect impacts to land use could occur outside of the project corridor as IAs attempt to circumvent the proposed infrastructure. These impacts cannot be quantified at this time because IA patterns and migration routes are completely out of USBP's control. However, the primary pedestrian fence would act as a force multiplier and allow for USBP to deploy agents to areas without pedestrian barriers. Therefore, potential adverse indirect impacts to land use would be minimal. Indirect beneficial impacts to land use on OPCNM are expected as a result of decreased illegal traffic within the project corridor. By reducing illegal traffic within and adjacent to the project corridor, damage to OPCNM north of the project corridor would also be reduced or possibly eliminated. OPCNM has identified that implementation of the Proposed Action Alternative might allow OPCNM to re-open some areas east of Lukeville (i.e., Gachado Line Camp) to the public that have been closed in the past due to IA activity (Kralovec 2007).

4.2 SOILS

4.2.1 Alternative 1: No Action Alternative

No ground disturbing activities would be conducted as a result of this alternative. Therefore, the No Action Alternative would have no direct impacts, either beneficial or adverse, on the soils within the project corridor. However, soils are currently indirectly impacted by illegal pedestrian traffic on OPCNM. In the absence of the primary pedestrian fence, IA foot traffic would continue and potentially increase, disturbing additional soils and causing soil erosion north of the project corridor.

4.2.2 Alternative 2: Proposed Action Alternative

The Proposed Action Alternative would permanently impact approximately 45 acres of soils within the project corridor through the construction of the primary pedestrian fence. About 17 acres of the total footprint are highly disturbed from the construction of the existing PVBs. Although these impacts would be permanent, they would not be considered significant because the impacts would primarily affect previously disturbed soils, and because of the vast amounts of similar soil types adjacent to the project corridor. No impacts to prime farmlands would occur.

As a result of this alternative, the volume of illegal pedestrian traffic would be expected to decrease and, consequently, would result in long-term indirect beneficial impacts to soils north of the project corridor. Indirect adverse effects to soils could occur in adjacent areas where the border infrastructure proposed under this alternative is not employed, as IAs try to circumvent the improved areas to avoid detection.

A Stormwater Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI) under the CWA's National Pollutant Discharge Elimination System (NPDES) would be required for all construction sites greater than 1 acre (33 U.S.C. §1342). These and other mitigation measures proposed to reduce or minimize erosion and ensure the hydrology of the project corridor is not permanently altered are discussed in Section 6.0.

4.3 BIOLOGICAL RESOURCES

4.3.1 Vegetation Communities

4.3.1.1 *Alternative 1: No Action Alternative*

There would be no direct impacts to the project corridor's vegetation communities as no construction would occur. Adverse, long term impacts to vegetation and vegetation communities would continue to occur from the continued damage caused by IA foot traffic on OPCNM. The No Action Alternative would not increase deterrence of illegal entry nor expand the window of opportunity for USBP agents to detect and respond to illegal entry attempts. Implementation of the No Action Alternative would result in continued indirect adverse impacts to vegetation communities from illegal traffic.

4.3.1.2 *Alternative 2: Proposed Action Alternative*

Implementation of the Proposed Action Alternative would result in the permanent loss of approximately 28 acres within the project corridor. The remaining 17 acres within the project corridor has no vegetation due to past construction and other human disturbances. The vegetation that does occur consists of locally and regionally common species; therefore, negligible effects would occur to the region's vegetation. Erosion within the disturbed areas would occur but would be minimized by implementing pre- and post-construction BMPs identified in the SWPPP. The proposed primary pedestrian fence and road would be designed and constructed in a manner that would not alter drainage patterns; thus, increased downstream erosion or sedimentation, which could affect vegetation communities, would not be expected.

Beneficial indirect impacts, such as a reduction of native vegetation being damaged from illegal activities and consequent USBP enforcement activities, would occur as IAs and smuggling activities are reduced or potentially eliminated within the area. Conversely, areas outside of the project corridor could be indirectly impacted as IAs attempt to avoid detection and circumvent the proposed infrastructure. These impacts cannot be quantified at this time because IA patterns and migration routes are completely out of USBP's control. However, the primary pedestrian fence would act as a force multiplier and allow USBP to deploy agents to areas without pedestrian barriers, therefore, minimizing potential adverse indirect impacts.

4.3.2 Wildlife

4.3.2.1 Alternative 1: No Action Alternative

No impacts to fish and wildlife resources would occur as a result of the implementation of the No Action Alternative because no construction activities would occur. However, indirect adverse impacts to wildlife from continued illegal pedestrian traffic degrading habitat would occur and could potentially increase.

4.3.2.2 Alternative 2: Proposed Action Alternative

Although approximately 45 acres would be permanently impacted from the Proposed Action Alternative, these impacts would be considered negligible, since much of the project corridor (17 acres) has been previously disturbed, and the remainder has limited and somewhat disturbed vegetation. The Proposed Action Alternative would not have direct impacts to fish or other aquatic species, because the proposed construction activities would not take place in naturally flowing or standing water. Mitigation measures would be implemented for construction in or near washes as stated in Section 6.0 and follow the measures described in the project's SWPPP to reduce potential impacts to riparian areas from erosion or sedimentation.

Mobile animals (e.g., birds) would escape to areas of similar habitat, while other slow or sedentary species of reptiles, amphibians, and small mammals could potentially be lost. As a result, direct minor adverse impacts to wildlife species in the vicinity of the project corridor are expected. Although some animals may be lost, this alternative would not result in any substantial reduction of the breeding opportunities for birds and other animals on a regional scale due to the tens of thousands of acres of suitable, similar habitat adjacent to the project corridor. Additionally, mitigation measures would be implemented to ensure that no "take" of migratory birds occurs if this alternative is implemented, in accordance with the Migratory Bird Treaty Act (MBTA).

Although the primary pedestrian fence could preclude transboundary migration patterns of animals, especially larger mammals (e.g., mule deer [*Odocoileus hemionus*]), and thus fragmenting habitat within the project corridor, these impacts would be considered minimal. Habitat fragmentation typically affects species with small population sizes or that are dependent upon migration to obtain spatially or temporally limited resources (Gilpin and Hanski, 1991). The primary pedestrian fence would be designed and constructed in the washes to allow proper conveyance of flood flows. It is expected that these designs would also allow the transboundary migration of reptiles, amphibians, and small mammals, which would reduce the fragmentation

effects. Wildlife would also still be able to migrate across the U.S.-Mexico border either to the east or west of the project footprint terminus. In addition, the species located within the project corridor are regionally common in both the U.S. and Mexico. Therefore, no significant adverse effects are anticipated to the region's wildlife population.

Indirect adverse impacts to wildlife habitat adjacent to the project corridor could occur as illegal pedestrian traffic attempts to circumvent the proposed infrastructure. It is possible for IAs to attempt illegal entry outside of the project corridor. However, the primary pedestrian fence would act as a force multiplier and allow USBP to deploy agents to areas without pedestrian barriers, minimizing potential adverse indirect impacts. Beneficial indirect impacts would be expected from the protection afforded to areas to the north of the project corridor due to the implementation of the Proposed Action Alternative.

4.3.3 Non-native and invasive species

4.3.3.1 Alternative 1: No Action Alternative

No impacts to non-native and invasive plants are expected as a result of the No Action Alternative because no construction activities would occur. However, indirect adverse impacts, such as the spread of non-native or invasive plants, could occur as a result of continued illegal pedestrian traffic.

4.3.3.2 Alternative 2: Proposed Action Alternative

Disturbance of 45 acres (total) of soils during the construction activities would result in favorable conditions for the establishment of non-native and invasive species. Disturbances would occur in vegetated areas that would create dispersal corridors for invasive species. However, because the project corridor would be patrolled and maintained by NPS and USBP (limiting potential for growth of new sprouts) and would be monitored for the spread of invasive species, potential impacts would not be considered significant. With the exception of Sonoyta Hill, some of the project corridor has been previously disturbed from the construction of the existing PVBs. Regardless, the establishment of invasive species within disturbed areas would be minimized through mitigation measures mentioned above and as described later in Section 6.0. The Proposed Action Alternative would also serve as a barrier to the spread of non-native and invasive plants, as many invasive plant propagules are transported into the U.S. on clothing of IAs (INS 2002).

4.4 UNIQUE AND SENSITIVE AREAS

4.4.1 Alternative 1: No Action Alternative

No impacts to unique and sensitive areas would result from the implementation of the No Action Alternative, as no construction would occur. However, indirect adverse impacts to unique and sensitive areas due to continued illegal pedestrian traffic would occur and could potentially increase.

4.4.2 Alternative 2: Proposed Action Alternative

Noise increases due to construction activities would be temporary; therefore, no long-term significant impacts to unique and sensitive areas, as a result of increases in ambient noise levels, would occur. The construction crews and equipment would access the project corridor along the border road primarily within the Roosevelt Reservation, limiting visual and noise impacts to the OPCNM. However, the use of South Puerto Blanco Road would be required to access the project corridor on the western face of Sonoyta Hill. A Special Use Permit from NPS would be needed for construction to access areas outside of the Roosevelt Reservation. This permit would be obtained prior to construction activities. Temporary impacts to aesthetics would be expected for the duration of the construction activities; however, these would be eliminated upon completion of this alternative. Permanent impacts to aesthetics would also be expected due to the additional infrastructure. However, these impacts would occur primarily within previously disturbed areas and mitigation measures (i.e., using non-reflective materials) would be implemented to ensure any impacts would be less than significant.

Furthermore, approximately 7 acres of unique and sensitive area (i.e., OPCNM) would be directly impacted. This area is located on Sonoyta Hill along the western terminus of the project corridor. Although OPCNM would be adversely impacted, these impacts would not be considered significant as the indirect beneficial impacts from long-term protection of the remaining portions of OPCNM would be expected to outweigh the direct impacts.

The proposed infrastructure would have indirect beneficial impacts to unique and sensitive areas by reducing the frequency of illegal pedestrian traffic on OPCNM and subsequent creation of trails and disposal of trash. Furthermore, long-term protection of OPCNM resources such as natural vegetation, landscapes, and cultural sites would be expected under the Proposed Action Alternative. Indirect adverse impacts such as a decline in visitor attendance may occur during

construction activities; however, once the construction activities are complete, OPCNM would be afforded better protection and a safer environment. Thus, in the long-term, visitor experiences would be potentially enhanced (see Section 4.1.2). Other indirect adverse impacts to unique and sensitive areas outside of the project corridor could occur if IAs chooses to circumvent the proposed primary pedestrian fence. However, the primary pedestrian fence would act as a force multiplier and allow USBP to deploy agents to areas without pedestrian barriers; therefore, potential adverse indirect impacts would be minimized.

4.5 WILDERNESS

4.5.1 Alternative 1: No Action Alternative

No impacts to Wilderness Areas would occur from the implementation of the No Action Alternative, as no construction would occur. However, indirect adverse impacts to Wilderness Areas north and west of the project corridor could occur, since illegal pedestrian traffic would continue to occur and could potentially increase.

4.5.2 Alternative 2: Proposed Action Alternative

Wilderness Areas as defined in the Wilderness Act of 1964 are lands in an area where the earth and its community of life are untrammelled by man. The Proposed Action Alternative would not directly impact any areas designated as Wilderness Area. However, noise associated with construction equipment and construction activities would adversely affect Wilderness Area characteristics. These impacts would be temporary because noise levels near the OPCNM Wilderness would return to preconstruction levels upon completion of construction activities. Additionally, aesthetic qualities inherent to Wilderness Areas would be adversely impacted by the sight of the primary pedestrian fence within the viewshed. Two schematic representations of how the fence would appear from South Puerto Blanco road (near the OPCNM Wilderness) are presented in Exhibit 4-1 and 4-2. Additionally, as shown previously in Photographs 3-1 through 3-3, the area along the border contains a lot of development, litter, trails, and other types of disturbances. The primary pedestrian fence would reduce the amount of IA-associated litter and trails and screen the surrounding development from park visitors. Therefore, the adverse impacts of the primary pedestrian fence, when compared to the No Action Alternative and the long-term benefits of the primary pedestrian fence, would be considered insignificant.

Exhibit 4-1. Schematic Representation of View from South Puerto Blanco Road Facing Southwest



Exhibit 4-2. Schematic Representation of View from South Puerto Blanco Road Facing Southeast



There is a potential for areas adjacent to the project corridor to experience an increase in illegal foot traffic with the implementation of this alternative. All or none of the illegal foot traffic could shift to either east or west of the project corridor and potentially into designated Wilderness Areas. However, the Proposed Action Alternative would allow USBP to deploy agents, as needed, to other areas that are unprotected, which would reduce IA traffic impacts to Wilderness Areas near the project corridor. Therefore, no significant direct or indirect impacts to Wilderness Areas would be expected upon implementation of the Proposed Action Alternative.

4.6 PROTECTED SPECIES AND CRITICAL HABITAT

4.6.1 Alternative 1: No Action Alternative

The No Action Alternative would not directly impact any protected species as no construction activities would occur. However, indirect adverse impacts to protected species, such as habitat degradation as a result of continued illegal pedestrian traffic, would occur and could potentially increase.

4.6.2 Alternative 2: Proposed Action Alternative

The potential impacts to the Sonoran pronghorn associated with the Proposed Action Alternative would be similar to those discussed in the 2003 NPS Final EA and are incorporated herein by reference (NPS 2003). As seen on Figure 3-1, the Sonoran pronghorn range is not within the project corridor. Additionally, the project corridor is located along the U.S.-Mexico border (which is rarely visited by the pronghorn), within 2.1 miles of the Lukeville POE (pronghorn are very reclusive and do not like human interaction), and contains previously disturbed habitat. Although no direct impacts would occur to the pronghorn, there is the potential for indirect adverse impacts if IA traffic shifts west of the proposed infrastructure. Therefore, through consultation with USFWS, CBP and USBP has determined that this alternative would adversely effect the Sonoran pronghorn. CBP and USBP would implement conservation measures, identified during the Section 7 consultation process, to offset these impacts. Some conservation measures that have been identified and would be implemented include:

1. During construction USBP would conduct daily observations of project region as close to dawn as possible to determine if Sonoran pronghorn are within 0.62 mile of project activities. No project work will begin until pronghorn move on their own volition to a distance greater than 0.62 mile from the activities. This measure would be relevant for those activities only on the western slope of Sonoyta Hill, where there is a greater potential for pronghorn to occur.

2. The number of vehicles traveling to and from the project site for construction purposes and the number of trips per day would be minimized to reduce the likelihood of disturbing pronghorn in the area or injuring an animal on the road. The use of vehicle convoys, multi-passenger vehicles, and other methods are appropriate to project construction.
3. CBP will provide assistance to annually fill one supplemental water for Sonoran pronghorn on OPCNM per the CBP programmatic mitigation agreement with USFWS.

The project corridor is not located near any known bat roosting sites, and therefore, would not affect any roost sites, including maternity roosts. Almost all of the Sonoran Desert is considered foraging habitat for the lesser long-nosed bat and OPCNM consist of over 330,300 acres of Sonoran Desert. The permanent disturbance of 28 acres of foraging habitat would amount to the loss of less than 0.0006 percent of foraging habitat within the OPCNM. However, USBP and USFWS have determined that this loss would constitute an adverse impact on the lesser long-nose bat. Conservation measures developed through the Section 7 consultation process would be implemented by USBP to offset these impacts. For example, saguaro and other columnar cacti, which are main food sources for the lesser long-nosed bats, that are located within the project footprint would be removed, avoided, relocated, or replaced as part of the construction activities. Specifications regarding the size of columnar cacti to be relocated or replaced are presented in Section 6.0. Examples of other conservation measures that have been identified and would be implemented include the following:

1. Clearly demarcate the construction footprint to ensure construction contractors do not expand the disturbance area.
2. Salvage of lesser-long nosed bat food plants from areas to be disturbed by project activities as described in the salvage plan.
3. Complete a restoration plan for various illegal trails and roads to compensate for creation or improvement of roads needed for the fence project (in addition to other concerns, this will address the control of non-native, invasive plant species) within six months of issuance of the Biological Opinion.

Although no Sonoran desert tortoises or Mexican rosy boas were observed within the project corridor, the potential exists for them to occur near Sonoyta Hill. Wildlife strikes could be caused by construction vehicles or USBP patrol vehicles during project construction, maintenance activities, and during future USBP operations. However, the likelihood of these strikes are low because of the ability of most wildlife species to escape to surrounding habitat and the relatively low vehicle speed of construction and USBP patrol vehicles, especially in this rugged terrain. Due to the beneficial impacts of a reduction of habitat degradation north of the project corridor

combined with mitigation measures discussed in Section 6, these potential impacts to these two species are considered insignificant.

Additionally, the cactus ferruginous-pygmy owl has the potential to exist in the project corridor. However, the habitat in the project corridor is extremely limited and classified as ranging from poor to moderate with the exception of the western slope of Sonoyta Hill (NPS 2003). Therefore, due to the previously disturbed nature of some of the project corridor in conjunction with the limited quality habitat available, CBP has determined that the Proposed Action Alternative would not adversely affect the cactus ferruginous pygmy owl.

Indirect adverse impacts to potentially suitable habitat for protected species along the southwest border could occur due to IAs shifting their activities in order to avoid apprehension. It is impossible, however, for USBP to determine how much of the illegal pedestrian traffic currently entering the project corridor would shift either to the east, west, or be eliminated completely. The implementation of the Proposed Action Alternative would reduce or eliminate illegal foot traffic north of the primary pedestrian fence within the project corridor, protecting habitat that could otherwise be disturbed and permanently degraded. Further, because the primary pedestrian fence would act as a force multiplier, USBP would be able to deploy agents to those areas without primary pedestrian fence, minimizing potential indirect impacts to protected species habitat.

4.6.3 Critical habitat

No critical habitat exists near or within the project corridor; therefore, no direct impacts would be expected. Indirect adverse impacts could occur to areas outside of the project corridor (*i.e.*, Quitobaquito Springs); however, these potential impacts are outside of the USBP's control. IA movement, if any, to avoid the proposed infrastructure would be totally at the IAs discretion. Because the primary pedestrian fence would act as a force multiplier, USBP would be able to deploy agents to those areas lacking primary pedestrian fence and therefore, minimize potential indirect impacts.

Water would be trucked into the project corridor from sources located north of the OPCNM. These sources would be located within a completely different watershed and basin than Quitobaquito Springs. Therefore, the use of groundwater for the implementation of this project is

not expected to cause a deficit of water availability nor a drop in hydrostatic pressure for Quitobaquito Springs.

4.7 CULTURAL RESOURCES

4.7.1 Alternative 1: No Action Alternative

No impacts to cultural resources are expected, as no construction activities would occur. However, indirect adverse impacts to cultural resources as a result of continued IA pedestrian traffic disturbing cultural resources north of the project corridor could occur, and could potentially increase.

4.7.2 Alternative 2: Proposed Action Alternative

Three historic objects, International Boundary Monument 166, 167, and 168 are located within the project corridor and could be potentially affected by the Proposed Action Alternative. The historic objects are listed on the NRHP and are considered significant cultural resources. Mitigation measures to avoid adverse impacts to the cultural resources are outlined in Section 6 of this document. These measures, as well as other potential mitigation measures developed through consultation with the Arizona State Historic Preservation Officer (SHPO), would assure that no adverse impacts would occur to these cultural resources. SHPO concurrence with USBP's determination of "no affect to historic properties" is included in Appendix C.

As a result, the Proposed Action Alternative would not result in significant impacts on cultural resources provided mitigation measures, which will be identified through the Section 106 process, are properly implemented.

4.8 AIR QUALITY

4.8.1 Alternative 1: No Action Alternative

No impacts to air quality are expected as no construction activities would occur. However, indirect adverse impacts to air quality from illegal pedestrian traffic and subsequent USBP enforcement activities would occur, and could potentially increase.

4.8.2 Alternative 2: Proposed Action Alternative

Fugitive dust or PM-10 from soil disturbance, and emissions associated with construction equipment engines, are expected to create temporary, minor increases in air pollution in the project corridor. Due to the short duration of the construction project, any increases or impacts on ambient air quality are expected to be short-term and below levels that would cause Pima County to be in non-attainment for air quality standards.

A model was used to estimate the total air emissions from the new construction activities. Calculations were made for standard construction equipment such as drilling rigs, hole cleaners, generators, cement trucks, backhoes, cranes, and bulldozers using emission factors from EPA approved emission model NONROAD6.2. Model results for air emissions are presented in Appendix D. Fugitive dust emissions were calculated using emission factors from Mid-Atlantic Regional Air Management Association (MARAMA 2006) for the primary pedestrian fence construction.

Assumptions were made regarding the type of equipment, duration of the project, and the number of hours per day each type of equipment would be used. The assumptions, emission factors, and resulting calculations are presented in Appendix D. A summary of the total emissions are presented in Table 4-1. As Pima County is in attainment for all air quality standards, an air conformity analysis is not required.

Table 4-1. Total Air Emissions (tons/year) from Construction Activities

Pollutant	Total (tons/year)
Carbon Monoxide	23.49
Volatile Organic Compounds	5.28
Nitrogen Oxides	43.93
Particulate Matter <10 microns	32.92
Particulate Matter < 2.5 microns	9.52
Sulfur Dioxide	5.38

Source: 40 CFR 51.853 and Gulf South Research Corporation (GSRC) 2007

Impacts from combustible air emissions due to everyday USBP traffic are expected to be the same after the primary pedestrian fence is built as they are currently. Construction workers would temporarily increase the combustible emissions in the air shed during their commute to and from work. Supplies would have to be delivered to the site by large delivery trucks. The

emissions from supply trucks and workers commuting to work were included in the air emission analysis (Appendix D) and in the totals presented in Table 4-1.

During the construction of the proposed project, proper maintenance of all vehicles and other construction equipment shall be implemented to ensure that emissions are within the design standards of all construction equipment. Dust suppression methods (e.g., watering of soils) shall be implemented to minimize fugitive dust emissions. Such measures would further ensure that air emissions generated by the Proposed Action Alternative would be temporary and would not significantly impair air quality in the region.

Indirect impacts to air quality due to the shifting of illegal traffic in order to avoid the proposed infrastructure is possible; however, it is unknown where IAs would choose to breach the U.S.-Mexico border. Therefore, it is impossible for USBP to determine how much of the illegal traffic currently entering the project corridor would shift either to the west or be eliminated completely.

4.9 WATER RESOURCES

4.9.1 Alternative 1: No Action Alternative

No impacts to water resources as a result of the No Action Alternative are expected because no construction activities would occur.

4.9.2 Alternative 2: Proposed Action Alternative

No wetlands would be either directly or indirectly impacted as a result of this alternative as none exist within the project corridor. A total of 16 intermittent streams cross the project corridor. All appropriate CWA Section 404 Permits from the U.S. Army Corps of Engineers (USACE) Los Angeles District Regulatory Branch, as well as Section 401 Water Quality Certifications from the Arizona Department of Environmental Quality, would be obtained prior to any fill material being placed in potential jurisdictional waters of the U.S. As mentioned previously, the primary pedestrian fence and road would be designed and constructed in a manner that would not alter drainage patterns or exacerbate erosion and sedimentation problems. Pre- and post-construction BMPs would also be implemented to further reduce the potential for erosion and sedimentation. Some of these measures are described in Section 6.0. Furthermore, as mentioned in Section 2.2, USBP would be responsible for maintaining the primary pedestrian fence and assuring that any

debris accumulated along the primary pedestrian fence during rain events is quickly removed to prevent backwater flooding.

Although the project corridor traverses the 100-year floodplain, no adverse impacts are expected. The design of the primary pedestrian fence will incorporate features to ensure that flows and flood elevations within the floodplain are not adversely modified, both locally and regionally. CBP has determined that there is no other practicable alternative to constructing sections of the fence within the floodplain, as the border bisects the floodplain and the proposed fence must be located on the border. Therefore, the Proposed Action Alternative would not contradict E.O. 11988 nor create significant impacts to floodplains.

It is estimated that a range of 5.2 to 11.4 acre-feet of water would be required for dust suppression and construction activities. Water would be obtained from a source north of the OPCNM (e.g., Why, Ajo, or Gila Bend) and be trucked in to the project corridor. The use of water from these sources would not create a deficit either locally or regionally. Therefore, no significant impacts to groundwater within the project corridor would be expected.

During construction activities, degradation of water quality as a result of sediment transported by stormwater within any of the washes located within the project corridor would be minimized by implementing the SWPPP and best management practices (BMPs). Equipment required for the construction activities would not be staged or stored within 100 feet of washes to prevent any contamination from accidental petroleum, oil, and lubricants (POL) spills that could occur. Additionally, the primary pedestrian fence within washes would be designed and constructed to ensure that the primary pedestrian fence does not impede flow nor contribute significantly to sedimentation or erosion within the washes. Therefore, no significant impacts to surface waters would be expected.

Indirect impacts associated with the construction process would be insignificant, and minimized through the implementation of mitigation measures discussed in Section 6.0. Additional indirect impacts to water quality outside of the project corridor could also occur as IAs attempt to circumvent the proposed infrastructure. However, it is unknown at this time where, when, or if IAs will try to circumvent the project corridor, as this is completely out of USBP control and totally at the IAs' discretion. Although it is unknown where IAs might try to circumvent the proposed infrastructure, the primary pedestrian fence would act as a force multiplier and allow USBP to

deploy agents to unprotected areas. Thus, any potential indirect impacts to water resources outside the project corridor would be further minimized.

4.10 SOCIOECONOMICS

4.10.1 Alternative 1: No Action Alternative

No impacts to the region's socioeconomic resources would occur under the No Action Alternative, as no construction activities would take place. However, the current level of illegal pedestrian traffic would continue at its current rate and possibly increase. As a result, illegal traffic and the crimes and social costs associated with it would also continue or increase; thus, long-term, adverse socioeconomic impacts across the region would be incurred.

4.10.2 Alternative 2: Proposed Action Alternative

Direct beneficial impacts from the Proposed Action Alternative include minor and temporary increases in sales volumes, housing demands for construction crews, material purchases, and sales taxes. Additionally, implementation of the Proposed Action Alternative would reduce the amount of illegal pedestrian traffic in the region, which, in turn, would reduce the associated societal and economic costs to the region. These societal and economic costs include but are not limited to the costs of removal of trash, overall degradation of property, reduction in property value, and degradation of natural and cultural resources (*i.e.*, OPCNM). Consequently, this reduction in illegal traffic would have an indirect beneficial long-term impact to the local economy.

Impacts regarding E.O. 13045 and E.O. 12898 from the implementation of the Proposed Action Alternative would be similar to those previously discussed in the 2003 Final EA and are incorporated herein by reference (NPS 2003). Given the remote location of the primary pedestrian fence, there is no potential for disproportionately high and adverse impacts to minority populations and low income families. The primary pedestrian fence would reduce illegal traffic north of the project corridor, making it safer for everyone regardless of race, nationality, age, or income level. Therefore, no significant impacts relative to environmental justice or protection of children issues are expected as a result of the Proposed Action Alternative.

Indirect impacts could occur to areas outside of the project corridor if illegal pedestrian traffic shifts to other areas of the U.S.-Mexico border (*i.e.*, TON). However, it is impossible to determine what those impacts would be, if any, as the direction or lack thereof is solely at the discretion of the

IAs. As mentioned previously, the primary pedestrian fence would allow USBP to deploy agents to those areas lacking infrastructure to minimize impacts from any potential shift in IA traffic.

4.11 NOISE

4.11.1 Alternative 1: No Action Alternative

No noise impacts would occur as a result of the No Action Alternative because construction activities would not occur. However, indirect adverse impacts from illegal pedestrian traffic and consequent USBP enforcement activities would continue and possibly increase.

4.11.2 Alternative 2: Proposed Action Alternative

Noise levels created by the transport of construction vehicles, construction equipment, and construction activities would vary depending on several factors, such as climatic conditions, season, and the condition of the equipment. All construction and transport activities would occur during daylight hours. OPCNM and its associated Wilderness Area are considered sensitive noise receptors within the region. However, noise levels would decrease to an inaudible level as the distance between the construction activities and the noise receptors (OPCNM and Wilderness Area) increases. As mentioned in Section 3.11, noise from construction equipment would be reduced to 55 dBA (*i.e.*, acceptable noise level) within 2,600 feet. Additionally, the project corridor is located adjacent to the Lukeville POE and Sonoyta, Mexico, which are constant sources of noise within the region. Therefore, because the increased noise levels would be temporary and minor, no direct significant impacts to ambient noise levels would occur upon completion of construction.

Indirect impacts as a result of IAs trying to circumvent the proposed infrastructure could occur to areas outside the project corridor. However, it is impossible for USBP to determine how much of the illegal traffic would shift either to the east, west, or be eliminated completely.

4.12 AESTHETICS

4.12.1 Alternative 1: No Action Alternative

No impacts to aesthetics would occur upon implementation of the No Action Alternative as no construction activities would occur. However, indirect adverse impacts to aesthetics as a result of IAs trampling vegetation and leaving trash and debris would continue and possibly increase.

4.12.2 Alternative 2: Proposed Action Alternative

The construction of 0.65 miles of primary pedestrian fence over the Sonoya Hill would create additional impacts as compared to the No Action Alternative. However, due to the existing infrastructure surrounding Sonoya Hill combined with mitigation measures (see Section 6.8), these impacts would not be considered significant. The construction of 5.2 miles of primary pedestrian fence would not differ substantially from the existing border infrastructure (e.g., chain link fence, PVBs). In addition, the Lukeville POE, illegal trails, trash, and developments within Sonoya, Mexico also detract from the visual qualities of the project corridor, as shown previously in Photographs 3-1 through 3-3. A short term minimal impact to aesthetics would occur during construction; however, there would be no long term significant adverse impacts on the visual quality of the region.

Indirect adverse impacts related to the possibility of IAs circumventing the proposed primary pedestrian fence would be similar to those mentioned previously. Beneficial indirect impacts would be expected as the primary pedestrian fence would eliminate IA traffic and associated trash and illegal trails in the project corridor.

4.13 Hazardous and Solid Waste

4.13.1 Alternative 1: No Action Alternative

No impacts regarding hazardous or solid waste are expected, as no construction activities would occur.

4.13.2 Alternative 2: Proposed Action Alternative

The potential exists for POL spills to occur while refueling construction equipment used during the implementation of the Proposed Action Alternative. However, clean-up materials (e.g., oil mops) would be maintained at the project site to allow immediate action in case an accidental spill occurs. Drip pans would be provided for stationary equipment to capture any POL that is accidentally spilled during maintenance activities or leaks from equipment. In addition, a Spill Prevention, Control, and Countermeasures Plan (SPCCP) would be in place prior to the start of construction, and all personnel would be briefed on the implementation and responsibilities of this plan. OPCNM would be provided a copy of the SPCCP prior to construction activities.

Sanitary facilities would be provided during construction activities and waste products would be collected and disposed of by licensed contractors. No gray water would be discharged to the ground. Disposal contractors would disposed of all waste in strict compliance with Federal, state, and local regulations, in accordance with the contractor's permits.

The proposed infrastructure would also have indirect beneficial impacts through the reduction of solid waste. As illegal foot traffic is reduced or eliminated within the project corridor, so would the solid waste that is associated with it.

SECTION 5.0
CUMULATIVE IMPACTS

5.0 CUMULATIVE IMPACTS

This section of the EA addresses the potential cumulative impacts associated with the implementation of the alternatives and other projects/programs that are planned for the region. The CEQ defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). This section continues, “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

USBP has been conducting law enforcement actions along the border since its inception in 1924 and has continuously transformed its methods as new missions, IA modes of operations, agent needs and national enforcement strategies have evolved. Development and maintenance of training ranges, station and sector facilities, detention facilities, and roads and fences have impacted thousands of acres with synergistic and cumulative impacts to soil, wildlife habitats, water quality, and noise. Beneficial effects, too, have resulted from the construction and use of these roads and fences including, but not limited to, increased employment and income for border regions and its surrounding communities; protection and enhancement of sensitive resources north of the border; reduction in crime within urban areas near the border; increased land value in areas where border security has increased; and increased knowledge of the biological communities and pre-history of the region through numerous biological and cultural resources surveys and studies.

With continued funding and implementation of CBP’s environmental conservation measures, including environmental education and training of its agents; use of biological and archeological monitors; wildlife water systems; and restoration activities, adverse impacts due to future and on-going projects would be avoided or minimized. However, recent, on-going and reasonably foreseeable proposed projects will result in cumulative impacts. In particular, within the next 2 years, 225 miles are scheduled to be completed. The first phase of construction would occur in areas that have already been developed (e.g., currently contains PVB or temporary vehicle barriers [TVB]) and thus, little or no additional environmental impacts would be expected. The second phase of construction would generally occur in more remote areas, and would inevitably result in cumulative impacts. It should be noted that the final locations for the primary

pedestrian fence have not been determined yet so, these should be considered only as planning estimates.

A list of the past, on-going, and other proposed projects within the region surrounding the Ajo Station's AO are summarized in Table 5-1:

Table 5-1. Recently Completed or Reasonably Foreseeable USBP projects in Ajo Station's AO

Project	Approximate Distance from Project Corridor (miles)	Approximate Acres Permanently Impacted
Installation of 26 emergency beacons within the CPNWR and BMGR	24	0
Implementation of Operation Skywatch (a seasonal search and rescue mission using helicopters and fixed-wing aircraft)	0	0
Proposed construction of 36 miles of pedestrian barrier, 35 miles of patrol and drag road, eight water wells, two new temporary staging areas, five existing staging areas, and approximately 7.5 miles of improvements to north-south access roads	70	198
Proposed acquisition of 30 acres adjacent to the USBP Ajo Station for horse corral, station expansion, and parking	30	30
Proposed installation of five camp details, access and maintenance of approximately 300 miles of roads on CPNWR and BMGR, installation of eight temporary vehicle barriers, construction of 104 miles of all-weather road, construction of 114 miles of drag roads, and construction of approximately 36 miles of permanent vehicle barriers on the CPNWR	40	589
Proposed installation of two additional rescue beacons on CPNWR	18	0
Proposed installation of 12 RVS systems along the U.S.-Mexico border south of Ajo, Arizona	30	1
Proposed improvement of 80 miles of all weather patrol road and construction of 50 miles of PVBs on TON as well as a construction access road for the installation and maintenance of the PVBs	15	72
Proposed installation of a water well and upgrade of Desert Grip camp detail including road improvements in the Wellton Station's AO	25	14
New infrastructure at the Lukeville – Sonoyta crossing including office space, light industrial space, health unit space, and warehouse/storage space (Garcia 2007)	0	1
Proposed widening of the El Camino Del Diablo to approximately 18-feet wide.	15	62
Proposed installation of 14 tower sites in the Ajo Station AO.	15	7
Total		974 acres

The USBP might be required to implement other activities and operations that are currently not foreseen or mentioned in this document. These actions could be in response to National emergencies or security events like the terrorist attacks on September 11, 2001 or to changes in the mode of operations of the potential IAs.

In addition, projects are currently being planned by other Federal entities which could affect areas in use by USBP. CBP should maintain close coordination with these agencies to ensure that CBP activities do not conflict with other agency(s) policies or management plans. CBP will consult with applicable state and Federal agencies prior to performing any construction activities and will coordinate operations so that it does not impact the mission of other agencies. The following is a list of projects other Federal agencies and tribes are conducting or have completed within the U.S.-Mexico border region.

OPCNM:

1. Planned installation of fiber optic cable along State Route 85 from the northern boundary of the OPCNM to the Visitors Center (Kralovec 2007b).
2. Proposed installation of approximately 2 miles of new water line from the Visitors Center to the Camp Grounds (Kralovec 2007b).

A summary of the anticipated cumulative impacts relative to the Proposed Action Alternative (*i.e.*, construction of 5.2 miles of primary pedestrian fence within the Ajo Station) is presented below. These discussions are presented for each of the resources described previously.

Land Use. A significant impact would occur if any action is inconsistent with adopted land use plans or an action would substantially alter those resources required for, supporting or benefiting the current use. The Proposed Action Alternative would only permanently affect 45 acres, of which 38 are located in the Roosevelt Reservation that was set aside specifically for border control actions. The use of 7 acres of NPS lands on the OPCNM would not be considered cumulatively significant as the OPCNM encompasses over 330,000 acres and the impact would account for less than 0.002 percent of the OPCNM total acreage. In addition, a Special Use Permit would be obtained by USBP for the use of this land for construction of the road and fence which acts as a tool to protect the remainder of the park. Therefore, this action within the Roosevelt Reservation is consistent with the authorized land use and, when

considered with other potential alterations of land use, would not be expected to result in a significant cumulative adverse effect.

Soils. A significant impact would occur if the action exacerbates or promotes long-term erosion, if the soils are inappropriate for the proposed construction, and would create a risk to life or property; or if there would be a substantial reduction in agricultural production or loss of prime farmland soils. The proposed action and other USBP actions have not reduced prime farmland soils or agricultural production. Pre- and post-construction SWPPP measures would be implemented to control soil erosion. No inappropriate soil types are located in the project corridor that would present a safety risk. The impact to 45 acres, including 17 acres of previously disturbed soils, when combined with past and proposed projects in the region, would not be considered a significant cumulative adverse impact.

Biological Resources. The significance threshold for biological resources would include a substantial reduction in ecological process, communities, or populations that would threaten the long-term viability of a species or result in the substantial loss of a sensitive community that could not be off-set or otherwise compensated. Removal of 28 acres of locally common habitat would result in insignificant cumulative impacts to vegetation communities and wildlife populations since habitat in the project corridor is regionally common. The long-term viability of species and communities in the project region would not be threatened. The loss of 28 acres of wildlife habitat, when combined with other ground disturbing or development projects in the project region, would not result in significant cumulative negative impacts on the region's biological resources.

Cultural Resources. The proposed action would have no effect on cultural resources. Therefore, this action, when combined with other existing and proposed projects in the region, would not result in significant cumulative impacts to historical properties.

Air Quality. Impacts to air quality would be considered significant if the action resulted in a violation of air quality standards, obstructs implementation of an air quality plan, or exposes sensitive receptors to substantial pollutant concentrations. The emissions generated during and after the construction of the proposed primary pedestrian fence would be short-term and minor. Although maintenance of the primary pedestrian fence would result in cumulative impacts to the region's airshed, these impacts would not be considered significant even when combined with

the other proposed developments in the border region. Deterrence of and improved response time to IAs created by the construction of the primary pedestrian fence would reduce off-road enforcement actions that are currently required by USBP agents.

Water Resources. The significance threshold for water resources include any action that substantially depletes groundwater or surface water supplies or interferes with groundwater recharge, substantially alters drainage patterns, or results in the loss of waters of the U.S. that cannot be compensated. No significant impact to water resources would occur as a result of the construction and maintenance of the proposed primary pedestrian fence. The required SWPPP and BMPs would reduce erosion and sedimentation during construction to negligible levels and would eliminate post-construction erosion and sedimentation from the site. The same measures would be implemented for other construction projects; therefore, cumulative impacts would not be significant.

Socioeconomics. Significance threshold for socioeconomic conditions include displacement or relocation of residences or commercial buildings; increases in long-term demands to public services in excess of existing and projected capacities; and disproportionate impacts to minority and low income families. Construction of the proposed infrastructure would result in temporary cumulative beneficial impacts to the region's economy. No impacts to residential areas, population, or minority or low-income families would occur. These effects, when combined with the other currently proposed or on-going projects within the region, would not be considered as significant cumulative impacts.

Noise. Actions would be considered to cause significant impacts if they permanently increase ambient noise levels over 65 dBA. Most of the noise generated by the proposed action would occur during construction and, thus, would not contribute to cumulative impacts to ambient noise levels. Routine maintenance of the primary pedestrian fence would result in slight temporary increases in noise levels that would continue to sporadically occur over the long-term and would be similar to ongoing PVB maintenance within the project corridor. Potential sources of noise from other projects are not enough (temporal or spatial) to increase ambient noise levels above the 65 dBA range at the proposed sites. Thus, the noise generated by the construction and maintenance of the proposed infrastructure, when considered with the other existing and proposed projects in the region, would not be considered a significant cumulative adverse effect.

Aesthetics. Actions that cause the permanent loss of the characteristics that make an area visually unique or sensitive would be considered to cause a significant impact. No major impacts to visual resources would occur from implementing the proposed action, due in part to the heavily degraded nature of the project corridor, development on the south side of the border, and the existing border tactical infrastructure. Construction and maintenance of the proposed primary pedestrian fence, when considered with existing and proposed developments in the surrounding area, would not result in a significant cumulative negative impact on the visual quality of the region. Areas north of the border would experience beneficial, indirect cumulative effects by the reduction of trash and debris produced by IAs.

Hazardous and Solid Wastes. Significant impacts would occur if an action creates a public hazard, the site is considered a hazardous waste site that poses health risks, or if the action would impair the implementation of an adopted emergency response or evacuation plan. Only minor increases in the use of hazardous substances (e.g., POL) would occur as a result of the construction and maintenance of the primary pedestrian fence. No health or safety risks would be created by the proposed action. The effects of this proposed action, when combined with other on-going and proposed projects in the region, would not be considered a significant cumulative effect.

SECTION 6.0
MITIGATION MEASURES

6.0 MITIGATION MEASURES

This chapter describes those measures that would be implemented to reduce or eliminate potential adverse impacts to the human and natural environment. Many of these measures have been incorporated as standard operating procedures by USBP on past projects. It is USBP policy to mitigate adverse impacts through the sequence of avoidance, minimization, and finally, compensation. Mitigation measures are presented below for each resource category that would be potentially affected. It should be noted that if any of the alternatives for this project are implemented, the following mitigation measures could be employed.

6.1 GENERAL CONSTRUCTION ACTIVITIES

BMPs would be implemented as standard operating procedures during all construction activities, and would include proper handling, storage, and/or disposal of hazardous and/or regulated materials. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils and solvents would be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein. The refueling of machinery would be completed following accepted industry guidelines, and all vehicles could have drip pans during storage to contain minor spills and drips. Although it will be unlikely for a major spill to occur, any spill of reportable quantities would be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock, etc.) would be used to absorb and contain the spill. Furthermore, any petroleum liquids (e.g., fuel) or material listed in 40 CFR 302 Table 302.4 of a reportable quantity must be cleaned up and reported to the appropriate Federal and state agencies. Reportable quantities of those substances listed on 40 CFR 302 Table 302.4 would be included as part of the SPCCP. A SPCCP would be in place prior to the start of construction and all personnel would be briefed on the implementation and responsibilities of this plan.

All construction would follow DHS management directive 5100 for waste management. All waste oil and solvents would be recycled. All non-recyclable hazardous and regulated wastes would be collected, characterized, labeled, stored, transported and disposed of in accordance with all Federal, state, and local regulations, including proper waste manifesting procedures.

Solid waste receptacles would be maintained at staging and bivouac areas. Non-hazardous solid waste (trash and waste construction materials) would be collected and deposited in the on-site receptacles. Solid waste would be collected and disposed of by a local waste disposal contractor. Waste materials and other discarded materials would be removed from the site as quickly as possible in an effort to keep the project area and surroundings free of litter.

Waste water (water used for project purposes that is contaminated with construction materials, was used for cleaning equipment and thus carries oils or other toxic materials or other contaminants in accordance with state regulations) is to be stored in closed containers on site until removed for disposal. Concrete wash water would not be dumped on the ground, but is to be collected and moved offsite for disposal.

6.2 SOILS

Erosion control techniques, such as the use of straw bales (weed free straw), aggregate materials, wetting compounds (*i.e.*, water) and revegetation with native plant species, where possible, would be incorporated with the design of the Proposed Action Alternative. In addition, other erosion control measures, as required and promulgated through the SWPPP, would be implemented before and after construction activities.

6.3 BIOLOGICAL RESOURCES

All contractors, work crews (including National Guard and military personnel), and CBP personnel in the field performing construction and maintenance activities would receive training on the habitat and habits of the species that are found in the area, including information on how to avoid impacts to the species from their activities. This training would be provided to all contractor and work crew project managers and senior military leaders who are working onsite. It would be the responsibility of these project managers and senior military leaders to ensure that their personnel are familiar with the BMPs and other limitations and constraints.

CBP would truck water into the project site for purposes of construction to ensure that no impacts to flora or fauna near and within Quitobaquito Springs would occur.

The MBTA requires that Federal agencies coordinate with USFWS if a construction activity would result in the “take” of a migratory bird. Since construction or clearing activities cannot be scheduled to avoid the nesting season (typically March 15 through September 15), preconstruction surveys for migratory bird species would occur immediately prior to the start of any construction activity to identify active nests. If construction activities would result in the “take” of a migratory bird, then coordination with USFWS and AGFD would occur, and applicable permits would be obtained prior to construction or clearing activities.

Although no Sonoran desert tortoises or Mexican rosy boas were observed during biological surveys the potential exists for these species to occur in and near Sonoya Hill. In the event a tortoise or boa is observed within the construction corridor during construction activities, a qualified biologist would capture and relocate the individual to an area outside of the corridor but still on Sonoya Hill.

CBP would truck water into the project site for purposes of construction to ensure that no impacts to flora or fauna near and within Quitobaquito Springs would occur.

A salvage plan would be developed by the CBP, in close coordination with NPS, prior to construction activities. CBP will salvage as many columnar cacti as possible. CBP will develop and fund a restoration plan, in coordination with the NPS to restore illegal trails and roads on OPCNM. This will enhance bat foraging opportunities.

Materials used for on-site erosion control would be free of non-native plant seeds and other plant parts to limit potential for infestation. Additionally, all areas within the construction footprint would be monitored for a period of three years for the spread and eradication of non-native and invasive species. Construction equipment would be cleaned using BMPs prior to entering and departing the OPCNM to minimize the spread and establishment of non-native and invasive species.

6.4 CULTURAL RESOURCES

Construction near the Gachado Line Camp would be monitored by a professional archeological monitor to ensure no impacts would occur. Buffers would be established around the three historic objects that lie within the proposed construction corridor in order to avoid any adverse effects to

these significant cultural resources. If any cultural material is discovered during the construction efforts, then all activities would halt until a qualified archeologist can be brought in to assess the cultural remains.

6.5 WATER RESOURCES

Standard construction procedures would be implemented to minimize the potential for erosion and sedimentation during construction. All work would cease during heavy rains and would not resume until conditions are suitable for the movement of equipment and material. In accordance with regulations of the EPA Phase II of the NPDES stormwater program, a SWPPP would be required for stormwater runoff from construction activities greater than 1 acre and less than 5 acres. Therefore, a SWPPP would be prepared and the NOI submitted prior to the start of any construction. Equipment required for the construction activities would not be staged or stored within 100 feet of any wash to prevent any contamination from accidental POL spills that could occur. Primary pedestrian fence constructed in washes/arroyos would be designed to ensure proper conveyance of floodwaters and to eliminate the potential to cause backwater flooding on either side of the U.S.-Mexico border. Immediately after rain events, CBP would be responsible for ensuring that debris is removed from the primary pedestrian fence within washes/arroyos to ensure that no backwater flooding occurs. Additionally, all concrete trucks would be washed and cleaned outside of the project corridor and OPCNM lands.

6.6 AIR QUALITY

Standard construction practices such as routine watering of the construction site would be used to control fugitive dust during the construction phases of the proposed project. Additionally, all construction equipment and vehicles would be required to be kept in good operating condition to minimize exhaust emissions.

6.7 NOISE

During the construction phase, short-term noise impacts are anticipated. All Occupational Safety and Health Administration requirements would be followed. On-site activities would be restricted to daylight hours with the exception of concrete pours and emergency situations. Construction equipment would possess properly working mufflers and would be kept properly tuned to reduce

backfires. Implementation of these measures would reduce the expected short-term noise impacts to an insignificant level in and around the construction site.

6.8 AESTHETICS

In order to minimize potential aesthetic impacts over Sonoyta Hill, CBP would use subdued and non-reflective materials to build the primary pedestrian fence. These materials are expected to blend with the landscape as it naturally rusts.

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SECTION 7.0
PUBLIC INVOLVEMENT

7.0 PUBLIC INVOLVEMENT

7.1 AGENCY COORDINATION

This chapter discusses consultation and coordination that has occurred during preparation of this document. Agency correspondence and consultation letters are included in Appendix C. Formal and informal coordination has been conducted with the following agencies:

- U.S. Fish and Wildlife Service (USFWS)
- U.S. Environmental Protection Agency (EPA)
- U.S. Section, International Boundary and Water Commission (USIBWC)
- Natural Resource Conservation Service (NRCS)
- Arizona State Historic Preservation Office (SHPO)
- Arizona Game and Fish Department (AGFD)
- Pima County Department of Environmental Quality
- National Park Service (NPS)
- Organ Pipe Cactus National Monument (OPCNM)
- U.S. Army Corps of Engineers, Los Angeles District (USACE)
- Federally Recognized Tribes

7.2 PUBLIC REVIEW

The draft EA was made available for public review for a period of 30 days, beginning on September 17, 2007, which is the day the Notice of Availability (NOA) was published in local newspapers. A copy of the NOA that was published, announcing the availability of the draft EA, is included on the following page. Comments received concerning the draft EA were addressed and, where appropriate, changes were incorporated into the final EA.

During the public review period, comments were received from USIBWC, TON, OPCNM, and AGFD. Copies of the comment letters are included in Appendix C as well as the comment/response matrix developed by CBP. In summary, USIBWC expressed their jurisdictional concerns pertaining to overland drainage flow into Mexico, maintenance of border monuments, and the structural integrity of proposed primary pedestrian fence. AGFD expressed its natural resource management concerns pertaining to habitat fragmentation and degradation, as well as the need to coordinate its responsibilities with CBP's mission. The OPCNM expressed concerns with traversing Sonoyta Hill and potential effects to groundwater supplies. The TON was

mainly concerned with viewshed and cultural landscape issues, and indirect effects of shifts in illegal traffic to the TON (see Appendix C).

Revisions to the Draft EA have been incorporated, as appropriate, to this Final EA, based on the comments received. In addition, CBP has coordinated with OPCNM to ensure that its primary concerns have been sufficiently addressed in this document.

TUCSON'S NEWSPAPERS

Tucson, Arizona

STATE OF ARIZONA)
COUNTY OF PIMA)

Debbie Capanear, being first duly sworn deposes and says: that she is the Legal Advertising Representative of the **TUCSON'S NEWSPAPERS COMPANY**, a corporation organized and existing under the laws of the State of Arizona, and that the said **TUCSON'S NEWSPAPERS PUBLISHING COMPANY** prints and publishes the Arizona Daily Star and Tucson Citizen, daily newspapers printed and published in the City of Tucson, Pima County, State of Arizona, and having a general circulation in said City, County, State and elsewhere, and that the attached

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was printed and published correctly in the entire issue of the said Arizona Daily Star and Tucson Citizen on each of the following dates, to-wit:

Sept. 17, 2007

Debbie Capanear

Subscribed and sworn to before me this 20th day of
Sept. 17, 2007

Silvia H. Valdez

Notary Public



SILVIA H. VALDEZ
Notary Public - Arizona
Pima County
Expires 12/15/09

My commission expires _____

TNI AD NO. _____

NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL
ASSESSMENT AND
DRAFT FINDING OF NO
SIGNIFICANT IMPACT
FOR THE INSTALLATION OF
5.2 MILES OF PRIMARY
FENCE U.S. BORDER PATROL
TUCSON SECTOR, ARIZONA

The public is hereby notified of the availability of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) to construct 5.2 miles of Primary Fence along the U.S.-Mexico border within the Ajo Station's Area of Operations (AO). This document addresses the construction of 0.65 miles of new primary fence and retrofitting 4.55 miles of existing permanent vehicle barriers with primary fence near the Lukeville Port-of-Entry.

This Draft EA and FONSI are available for review at the Ajo Public Library in Ajo, Arizona, and are also available at the following URL: <http://ecso.swf.usace.army.mil>. Additional copies are available upon written request. Written comments can be submitted to: U.S. Army Corps of Engineers, Fort Worth District, ATTN: CESWF-PM-EC50/McGregor, 819 Taylor Street, Room 3A28, Fort Worth, TX 76102 or via facsimile at (817) 886-6404. Comments must be received within 30 calendar days of the date of this publication.

Publish September 17, 2007
The Arizona Daily Star
Tucson Citizen

Publisher's Affidavit of Publication

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STATE OF ARIZONA }
COUNTY OF YUMA }

NOTICE OF AVAILABILITY

**DRAFT ENVIRONMENTAL
ASSESSMENT AND
DRAFT FINDING OF NO
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FOR THE INSTALLATION OF
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Fort Worth, TX 76102 or via
facsimile at (817) 886-6404.

Comments must be received within 30 calendar days of the date of this publication.

Daily September 17, 2007
#L35684

Julie Moreno or Patrick Norris, having been first duly sworn, deposes

and says: that The Sun is a newspaper of general circulation published daily in the City of Yuma, County of Yuma, State of Arizona; that (s)he is the publisher or business manager of said paper; that the

NOTICE OF AVAILABILITY

a printed copy of which, as it appeared in said paper, is hereto attached and made a part of this affidavit, was published in The Sun

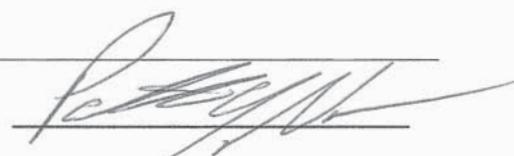
For ONE issues; that the date of the first publication of said **NOTICE OF AVAILABILITY**

was SEPTEMBER 17, 2007 and the date of the last publication being SEPTEMBER 17, 2007 and that the dates when said

NOTICE OF AVAILABILITY

was printed and published in said paper were

SEPTEMBER 17, 2007



Subscribed and sworn to before me, by the said Julie Moreno or Patrick Norris

19th day of September, 2007

Vingen R. Perez Notary Public

My commission expires May 10, 2009

SECTION 8.0
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8.0 REFERENCES

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SECTION 9.0
LIST OF PREPARERS

9.0 LIST OF PREPARERS

The following people were primarily responsible for preparing this Environmental Assessment.

NAME	AGENCY/ORGANIZATION	DISCIPLINE/EXPERTISE	EXPERIENCE	ROLE IN PREPARING EA
Patience E. Patterson, RPA	Architect-Engineer Resource Center	Archaeology	29 years, Professional Archeologist/Cultural Resource Manager	Project Manager, cultural resources review, and EA coordination
Charles McGregor	USACE, Fort Worth District, AERC	NEPA	10 years Environmental Management and Review	ECSO Project Manager, EA review and coordination
Suna Adam Knaus	Gulf South Research Corporation	Forestry/Wildlife	17 years, natural resources	EA review
Eric Webb, Ph.D.	Gulf South Research Corporation	Ecology/Wetlands	15 years experience in natural resources and NEPA studies	EA technical review
Chris Ingram	Gulf South Research Corporation	Biology/ Ecology	30 years EA/EIS studies	Project Coordinator/EA technical review
Josh McEnany	Gulf South Research Corporation	Forestry/Wildlife	7 years, natural resources and NEPA studies	Project Manager
Sharon Newman	Gulf South Research Corporation	GIS/graphics	11 years, GIS/graphics experience	GIS/graphics
Howard Nass	Gulf South Research Corporation	Forestry/Wildlife	17 years, natural resources	EA review
Shanna McCarty	Gulf South Research Corporation	Forestry	3 years natural resources	EA preparation
Steve Kolian	Gulf South Research Corporation	Environmental Science	10 years natural resources	EA preparation
Joanna Czniak	Gulf South Research Corporation	Wildlife	9 years natural resources	EA preparation

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SECTION 10.0
ACRONYMS

10.0 ACRONYMS

AO	Area of Operation
ACHP	Advisory Council on Historic Preservation
ADWR	Arizona Department of Water Resources
AGFD	Arizona Game and Fish Department
ARPA	Archeological Resources Protection Act
BEA	Bureau of Economic Analysis
BMP	Best Management Practice
BMGR	Barry M. Goldwater Range
CAA	Clean Air Act
CBP	U.S. Customs and Border Protection
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CPNWR	Cabeza Prieta National Wildlife Refuge
CWA	Clean Water Act
DNL	Day-Night average sound Level
dB	Decibel
dBA	A-weighted Decibel
DHS	Department of Homeland Security
EA	Environmental Assessment
EPA	U.S. Environmental Protection Agency
E.O.	Executive Order
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FR	Federal Register
GNEB	Good Neighbor Environmental Board
GSRC	Gulf South Research Corporation
IA	Illegal Alien
INS	Immigration and Naturalization Service
JTF-6	Joint Task Force Six
MBTA	Migratory Bird Treaty Act
MARAMA	Mid-Atlantic Regional Air Management Association
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NOA	Notice of Availability
NOI	Notice of Intent
OPCNM	Organ Pipe Cactus National Monument
PCDEQ	Pima County Department of Environmental Quality
PCPI	Per Capita Personal Income
POE	Port of Entry
POL	Petroleum, Oils, and Lubricants
PVB	Permanent Vehicle Barrier
ROI	Region of Influence

SHPO	State Historic Preservation Officer
SPCCP	Spill Prevention, Control, and Countermeasures Plan
SPEIS	Supplemental Programmatic Environmental Impact Statement
SWPPP	Storm Water Pollution Prevention Plan
TON	Tohono O'odham Nation
TPI	Total Personal Income
TVB	Temporary Vehicle Barrier
U.S.	United States
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USBP	U.S. Border Patrol
USFWS	U.S. Fish and Wildlife Service
WSC	Wildlife of Special Concern
WMDB	Western Mexican Drainage Basin

Exhibit 6Tucson Project 1, 2, 3 FY19 Vehicle and Pedestrian
Barrier Replacement Project (63 Miles)

W912PL19C0015

or facility.

1.11.5 Interruption of Existing Utilities Services

Perform the work under this Contract with a minimum of interruption and outage time for all utilities. For each relocation, by-pass, removal, connection, or abandonment, schedule work in a continuous effort, with minimum impact to utility service. Obtain written permission from utility purveyors and submit to the Contracting Officer a minimum of 7 days prior to work affecting their facilities.

1.11.6 Coordination

Existing utilities may be relocated, removed, or abandoned by others. Coordinate and cooperate with the utility purveyors and their contractors. Establish a mutual understanding of work schedules and use of the project site. Notify the Contracting Officer in writing of all proposed coordination activities.

1.12 BORDER PATROL BEST MANAGEMENT PRACTICES (BP BMP)

The Government will provide the Contractor with environmental clearance for compliance with NEPA requirements and best management practices (BMPs) that will minimize or avoid environmental impacts prior to the commencement of construction. Construction must not begin until the successful Contractor has received environmental clearance from the Government. The following BP BMPs are provided to address portions of the environmental protection requirements that are expected to be implemented on this project.

Incorporate all BMPs into the Contractor's Environmental Protection Plan (EPP), the Stormwater Pollution Prevention Plan (SWPPP), and **Fire Prevention and Suppression Plan**. Refer to Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS for EPP and SWPPP requirements.

1.12.1 General Construction Activities

- a. Implement BP BMPs as standard operating procedures during all construction activities, including proper handling, storage, and disposal of hazardous or regulated materials. Collect and store all fuels, waste oils, and solvents in tanks or drums within a secondary containment system that consists of an impervious floor and earthen dike capable of containing 125 percent of the volume of the containers stored therein. Refuel machinery following accepted guidelines, and provide drip plans for all vehicles while stored. Contain spills immediately and use an absorbent (e.g., granular, pillow, sock) to absorb and contain the spill. Immediately report any spill of a hazardous or regulated substance to the Contracting Officer.
- b. Collect non-hazardous solid waste (trash and waste construction materials) and deposit in on-site receptacles. Maintain solid waste receptacles and dispose as required. Place all food related trash items such as wrappers, cans, bottles, and food scraps in closable on-site receptacles and remove daily from the project site.
- c. No pets owned or under the care of any and all construction workers will be permitted inside the project's construction boundaries, adjacent native habitats, or other associated work areas.
- d. If construction or work activities are authorized at night, shield all lights and direct light only onto the work site and the area necessary

to ensure the safety of the workers. Use the minimum wattage needed.

- e. Vehicular traffic associated with the construction activities must remain on established roads to the maximum extent practicable. Speed limits should not exceed 35 mph on major unpaved roads (graded with ditches on both sides) and 25 mph on all other unpaved roads.
- f. The minimum number of roads needed for proposed actions must be constructed and maintained to proper standards. Roads no longer needed must be closed and restored to natural surface and topography using appropriate techniques. The GPS coordinates of roads that are thus closed must be recorded and provided to the Government. A record of acreage or miles of roads taken out of use, restored, and revegetated must be maintained. Photo document restoration efforts if they occur prior to completion of project. GIS files from the Contractor must be provided to BP.
- g. When available, areas already disturbed by past activities or those that will be used later in the construction period must be used for staging, parking, and equipment storage.
- h. Organic material must be collected and stockpiled during construction to be used in staging areas for erosion control while the areas naturally re-vegetate. Ensure that stockpiled organic material is free of invasive plant species to the greatest extent possible.
- i. Maintain existing roads during construction and return the existing roads to pre-construction conditions once construction is complete. The width of all roads that are created or maintained by the Contractor must be measured and recorded using Global Positioning System (GPS) coordinates and provided to the Government.
- j. If soil-binding agents are utilized, they must be applied during the late summer/early fall months to avoid impacts on federally listed species. Soil-binding agents must not be used in or near surface (within 100 feet) of waters (e.g., wetlands, perennial streams, intermittent streams, washes). Only apply soil-binding agents to areas that lack any vegetation.
- k. All disturbed soils not paved that will not be landscaped or otherwise permanently stabilized by construction must be seeded using species native to the project vicinity.
- l. Prior to the start of ground disturbing activities, arrange for and perform the control of noxious and invasive species in the project area.
- m. To prevent the introduction of invasive species seeds, all hauling and construction equipment, including work and personal vehicles, must be washed at the identified facility. All vehicles and equipment must be free of all attached soil, mud, vegetation, and other debris prior to entering the construction site.
- n. To prevent invasive species from leaving the site, inspect all construction equipment and remove all attached plant/vegetation and soil/mud debris prior to leaving the construction site.
- o. If vegetation must be removed, use hand tools, mowing, trimming, or other removal methods that allow root systems to remain intact to prevent disturbance that encourages establishment of invasive plant

species. This BMP does not apply to any non-native, invasive vegetation control that may occur.

- p. Use of herbicides must not occur in streams or other waterbodies, areas of suitable habitat within the range or designated critical habitat of threatened or endangered plant species.
- q. During follow-up monitoring of any restoration areas, invasive plants that appear on the site must be removed. Mechanical removal must be done in ways that eliminate the entire plant and remove all plant parts to a disposal area. All chemical applications on National Wildlife Refuges must be used in coordination with the NPS Integrated Pest Management Coordinator to ensure accurate reporting. Herbicides can be used according to label directions. Define the monitoring period in the site restoration plan.
- r. Water for construction use must be from wells at the discretion of the landowner. If local groundwater pumping is an adverse effect to aquatic, marsh, or riparian dwelling threatened and endangered species, treated water from outside the immediate area must be utilized. Identified new well locations and historic well locations must be verified with CBP prior to use.
- s. Address highly erodible soils in the SWPPP.
- t. A fire prevention and suppression plan must be developed and implemented for all activities that require welding or otherwise have a risk of starting a fire.
- u. Notify CBP 5 days before entering areas where work will occur.
- v. To the extent possible avoid traversing vehicles or equipment across flowing or standing watercourses.

1.12.2 Biological Resources

- a. Mark designated travel corridors with high visibility, removable or biodegradable markers, and minimize construction traffic through the corridor. No activities, ground disturbance, vegetation removal or trimming must occur outside of the marked designated work area.
- b. Prior to ground disturbing activities or vegetation removal or trimming, a qualified biologist to be provided by BP will present an environmental awareness program to all personnel who will be on-site, including but not limited to US Army Corps of Engineers employees, Contractor, Contractor employees, supervisors, inspectors, and subcontractors. The program will contain at a minimum information regarding migratory bird species, Southwestern Willow Flycatcher, the Yellow-billed Cuckoo, the Northern Mexican gartersnake, the Chiricahua Leopard frog, Sonora Tiger Salamander, the Beautiful Shiner, the Yaqui Catfish, the Yaqui Chub, the San Bernardino Springsnail, the Mexican Spotted owl, the Jaguar, Ocelot, the Sonoran Pronghorn, the Sonoran Desert Tortoise, Huachuca Water-umbel, Cochise Pincushion Cactus and the Wright's March Thistle. This will include general identification of the species, description of habitat, sensitivity of the species to human activity and describe measures for avoidance and protection of the species during construction. Following the education program, the photograph of the species must be posted in the office of the Contractor and resident engineer, where they will remain through the

duration of the project. The Contractor is responsible for ensuring that employees are aware of the listed species.

- c. Protection of the cactus and suitable habitat must be stressed in environmental education for Contractors involved in construction or maintenance of facilities.
- d. If construction or clearing activities are scheduled during the nesting season (typically March 1-September 1) the Government will perform a preconstruction survey for migratory bird species to identify active nests prior to the start of any construction or clearing activity. If construction activities will result in the disturbance or harm of a migratory bird, then coordination with the U.S. Fish and Wildlife Service (USFWS) and the applicable state Department of Game and Fish will be required. Establish buffer zones around active nests until nestlings have fledged and abandoned the nest.
- e. Areas hydro-seeded for temporary erosion-control measures must use only native plant species appropriate to surrounding habitat types.
- f. Removal of trees and brush in federally listed species habitats will be limited to the smallest amount needed to meet contract requirements.
- g. When an individual of a federally listed species is found within the project limits, cease work in the area of the species and notify the Contracting Officer. Any threatened and endangered species or species of concern, including but not limited to the Southwestern Willow Flycatcher, the Yellow-billed Cuckoo, the Northern Mexican gartersnake, the Chiricahua Leopard frog, Sonora Tiger Salamander, the Beautiful Shiner, the Yaqui Catfish, the Yaqui Chub, the San Bernardino Springsnail, the Mexican Spotted owl, the Jaguar, Ocelot, the Sonoran Pronghorn, and the Sonoran Desert Tortoise, must not be harmed, harassed or disturbed to the extent possible by project activities. Work may resume when the Government biologist safely removes the individual, or it moves away on its own. Individuals of federally listed species found in the project area and requiring relocation will be relocated by the Government biologist.
- h. Require all on-site workers to check under their parked vehicles and equipment prior to driving to make sure there is not a desert tortoise sheltering underneath the vehicle or equipment. If a desert tortoise is found sheltering underneath a parked vehicle or equipment, the desert tortoise must be allowed to move out from under the vehicle or equipment on its own or a biological monitor must be contacted to relocate the individual, adhering to the current handling guidelines for Sonoran desert tortoise issued by Arizona Game and Fish Department, Revised September 2014, before the vehicle or equipment can be moved.
- i. Do not use erosion control products containing mesh or netting with an opening $\frac{1}{4}$ inch width or greater within **600 feet** of the Quitobaquito Pond and drainage located 31.942142° , -113.021653° , approximately **13 miles** from the US Customs and Border Protection Lukeville Port of Entry, the San Pedro River (31.334191° , -110.147848°) and Black Draw (31.334000° , -109.260041°) due to the potential presence of the Northern Mexican gartersnake
- j. Transmission of disease vectors and invasive non-native aquatic species can occur if vehicles cross infected or infested streams or other waters and water or mud remains on the vehicle. If these vehicles

subsequently cross or enter uninjected or non-infested waters, the disease or invasive species may be introduced to the new area. To prevent this, crossing of streams or marsh areas with flowing or standing water must be avoided, and when unavoidable, spray the vehicle with a 10% bleach solution after the crossing before entering a new watershed. Photo document and provide GPS coordinates where correction is required and submit.

- k. Design light poles and other pole-like structures to discourage roosting by birds, particularly ravens or other raptors.
- l. To prevent entrapment of wildlife species during construction, all excavated, steep-walled holes or trenches more than 2 feet deep must be covered at the close of each working day by plywood or provided with one or more escape ramps constructed of earth fill or wooden planks. The ramps will be located at no greater than 1,000-foot intervals and will be sloped less than 45 degrees. Each morning before the start of construction and before such holes or trenches are filled, thoroughly inspect for trapped animals. Any animals discovered must be allowed to escape voluntarily (by escape ramps or temporary structures), without harassment, before construction activities resume, or removed from the trench or hole by the Government biologist.
- m. To prevent entrapment of wildlife species during construction, all vertical bollards that are hollow must be covered to prevent wildlife from entrapment. Deploy covers from the time the bollards are erected to the time they are filled.
- n. To eliminate attraction to predators of protected animals, all food related trash items such as wrappers, cans, bottles, and food scraps, must be disposed of in closed containers and removed daily from the project site. Photo document and provide GPS coordinates where correction is needed.
- o. Do not withdraw water from the San Pedro River or Black Draw for construction purposes due to the presence of endangered species and critical habitat.
- p. Do not begin work at the San Pedro River or Black Draw prior to the completion of the preconstruction surveys and/or threatened and endangered species relocations. Notify CBP to complete surveys and relocations for Threatened and Endangered species no less than 20 days prior to the scheduled work being completed.
- q. If surface waters or surface flows are present in the work area near the San Pedro River or Black Draw, any listed or native fish, reptile or amphibian within the work area must be removed and relocated, by a qualified biologist with the appropriate State and Federal Permits, to a location outside of the project area, preferably within the same watercourse, as identified by CBP and the appropriate land managing agency.
- r. Within the project area within the San Pedro Riparian National Conservation Area and Black Draw in the San Bernardino National Wildlife Refuge, install yellow rope to designate work areas associated with construction which must be maintained in good repair until work is completed within the drainages.
- s. In areas of riparian vegetation, the project work area must be

minimized to the extent possible. Vegetation within critical habitat or sensitive areas identified for removal and preservation must be clearly marked both in the field and on design plans, and otherwise communicated in the field to all workers.

- t. A qualified biologist must be present at all times while work is on-going within the San Pedro Riparian National Conservation Area and Black Draw within the San Bernardino National Wildlife Refuge. In the event flows enter the active construction area, the qualified biologist will determine if additional exclusionary measures or species relocations need to take place.
- u. For all in-water work in streams, sediment barriers must be used to avoid downstream effects of turbidity and sedimentation.
- v. The Border Patrol will provide monitors for environmental and cultural resources, throughout the contract performance period.

1.12.3 Air Quality

Use soil watering to minimize airborne particulate matter created from construction activities. Cover bare ground with erosion protection following construction.

1.12.4 Water Resources

Implement standard construction procedures to minimize the potential for erosion and sedimentation during construction. Suspend all work during heavy rains and do not resume until conditions are suitable for the movement of equipment, as directed. Work at the San Pedro River and Black Draw must be conducted during months when the surface flows are expected to be the lowest.

All equipment maintenance, staging, laydown, and dispensing of fuel, oil, or any other such activities, must occur in designated upland areas. The designated upland areas must be located in such a manner as to prevent any runoff from entering waters of the United States, including wetlands.

Waste water (water used for project purposes that is contaminated with construction materials, or was used for cleaning equipment, and thus carries oils or other toxic materials or other contaminants in accordance with state regulations) must be stored in closed containers on site until removed for disposal. Concrete wash water must not be dumped on the ground, but is to be collected and moved offsite for disposal.

The potential for entrapment of surface flows within the roadbed due to grading must be avoided or minimized. Depth of any pits created must be minimized so animals do not become trapped. Water tankers that convey untreated surface water must not discard unused water where it has the potential to enter surface waters or drainages. The environmental monitor or CBP will advise as to appropriate sites. Pumps, hoses, tanks and other water storage devices must be cleaned and disinfected with a 10% bleach solution at an appropriate facility (this water must not enter any surface water area) before use at another site, if untreated surface water was used. If a new water source is used that is not from a treated or groundwater source, the equipment must require additional cleaning. This is important to kill any residual disease organisms or early life stages of invasive species that may affect local populations of Threatened and Endangered species

Materials used for on-site erosion control in uninhabited native habitats must be free of non-native plant seeds and other plant parts to limit potential for infestation. Since natural materials cannot be certified as completely weed-free, if such materials are used, there must be follow up monitoring to document establishment of non-native plants and appropriate control measures should be implemented for a period of time to be determined in the site restoration plan.

1.12.5 Cultural Resources

Any known cultural resources must be clearly flagged for avoidance during construction. Contact CBP to complete any necessary flagging efforts for cultural resource avoidance prior to ground disturbing activities taking place.

Should any archaeological artifacts or human remains be found during construction, all ground disturbing activities in the vicinity of the discovery must stop and the Contractor must immediately notify the Contracting Officer.

Work will not resume until authorized.

1.13 GENERAL CONSTRUCTION REQUIREMENTS

1.13.1 Site Documentation

In the presence of the Contracting Officer, document existing site conditions using video recording and photographs prior to start of construction. Documentation must include the existing condition of all roads (on-site and egress/ingress), structures, and utilities within and immediately adjacent to the project limits. Submit the [Video and Photographic Documentation](#) on electronic media (CD or DVD). Refer to Section [01 30 00 ADMINISTRATIVE REQUIREMENTS](#) for additional information.

If any existing wall or fence not to be replaced is damaged or disturbed, repair the wall or fence to previously existing conditions or replace it in-kind if damaged beyond repair. Should it be necessary to disturb the foundation of the existing fence, provide all bracing or means of temporary shoring as to protect the existing fence in-place.

1.13.2 Traffic Control

To reduce impacts on roads and bikeways, coordinate construction traffic with local authorities. Refer to Section [01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS](#) for traffic control requirements.

1.13.3 Noise

During construction, adhere to all Occupational Safety and Health Administration (OSHA) requirements to minimize noise impacts on local communities. Maintain all equipment and vehicle exhaust systems to minimize vehicle-related noise impacts.

Minimize noise levels any time of day or night affecting federally listed animals. Place generators in baffle boxes, use an attached muffler, or use other noise-abatement methods, in accordance with industry standards.

1.13.4 Existing Tunnel Procedures

In the case that an underground tunnel or void is discovered during excavation, immediately notify the Contracting Officer and Border Patrol. The Contractor may be requested to perform tunnel destruction work, for which the Contractor may request an equitable adjustment to the Contract.

1.13.5 Construction Guidelines

1.13.5.1 Project Limits

Throughout the contract performance period, ensure all materials, equipment, vehicles, personnel and any other construction related items and activities are contained within the project limits. Indicate the project limits on the drawings. The perimeter of all areas to be disturbed during construction activities must be clearly demarcated using flagging or temporary construction fence to prevent unnecessary impacts. **Maintain all markings designating the allowed work area in good repair throughout the duration of construction. No disturbance outside that perimeter will be authorized unless otherwise approved.**

Off-road vehicle activity outside the project limits is prohibited.

1.13.5.2 Demolition

Demolition is a critical phase of this project; encroachment into Mexico will not be allowed. During excavation for demolition, the existing ground must not cave-in or collapse to the point where the International Boundary Line is compromised and existing features in Mexico will be damaged.

Completely remove all existing features required for construction of proposed features. Indicate all existing features to be removed on the drawings. Also remove existing Normandy fence at the east end of Tucson 1, that veers northeasterly from the proposed alignment.

1.13.5.2.1 Foundation Demolition

The foundation of the existing border fence may be reinforced or unreinforced concrete, concrete pilings, steel sheet pile or other foundation materials. Completely remove all existing border fencing above the existing fence foundation. Remove foundations that interfere with the construction of new features. Field verify all existing fence and foundation conditions.

1.13.5.2.2 Fence Demolition

The existing border fences are comprised of vehicle fencing and personnel fencing. Tucson 2 has parallel Normandy fence and mesh fence; the Normandy fence is between the mesh fence and the IBL. In a portion of Tucson 2, east of the Lukeville port of entry, there exists a dilapidated chain link fence with barbed wire, along the IBL. This fence may need to be removed in order to construct the bollard wall. Tucson 3 has barbed wire fence along the IBL. This fence may need to be removed in order to construct the bollard wall.

1.13.5.2.3 Crushed Miscellaneous Base

Crush and process demolished or excavated concrete, grout, and rock (not suitable for riprap or grouted stone), into Crushed Miscellaneous Base

(CMB) material, conforming to APWA specifications. Incorporate into the work or place in stockpiles. Include the disposition of CMB in the Contractor's design and indicate stockpile locations on the drawings. The CMB will become the property of the Government.

1.13.5.2.4 Disposition of Demolished Materials

All demolished materials will be come the property of the Contractor. All demolished foundation and other materials not crushed to CMB will become the property of the Contractor. All demolished Contractor property must be disposed of in accordance with the approved waste management plan. Refer to Section 01 74 19 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT for requirements.

1.13.5.2.5 Security During Demolition

Security must be maintained throughout the entire contract performance period. Implement methods and procedures to ensure border security at all times. Install temporary fencing to close-off all gaps resulting from existing fence demolition. Temporary fencing requirements are specified in Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS.

1.13.5.3 Clearing and Grubbing

- a. Perform selective clearing as required to perform the work; **avoid clearing the entire Roosevelt easement where possible.** Trim or prune trees in favor of removal where possible. Grub cleared areas as needed. Environmentally sensitive areas include areas of designated critical habitat, riparian vegetation, dense vegetation, vegetation surrounding drainages and any areas identified by CBP or the land managing agencies. These areas include but are not limited to the Organ Pipe Cactus National Monument, Quitobaquito Pond and drainage located 31.942142°, -113.021653° (approximately 13 miles from the Lukeville POE), the San Pedro Riparian National Conservation Area, Black Draw and Silver Creek. Include in the Contractor's project specification the requirement to submit for approval a clearing and grubbing plan, as a preconstruction submittal.
- b. Cleared and grubbed material may be chipped or mulched and stockpiled for reuse as mulch and erosion control. Ensure stockpiled organic material is free of invasive plant species to the greatest extent possible. Stockpiled material remaining at the end of construction must be spread over the staging and storage areas or removed from the site. Burning will not be allowed.
- c. In areas of riparian, including the San Pedro River/San Pedro Riparian National Conservation Area and Black Draw, any mature vegetation, including but not limited to mature cottonwoods and willows, must be identified and marked or flagged prior to removal. Only those marked or flagged **can** be removed. Large tree removal or trimming must be avoided when possible to maintain habitat for migratory birds and federally listed species within the area.
- d. Protect in place sauguro and organ pipe cacti, and agave plants. If these plants interfere with construction operations, relocate in accordance with the paragraph Plant Relocation.

1.13.5.4 Plant Relocation

Relocate saguaro and organ pipe cacti, and agave plants and other vegetation identified by CBP or the land managing agencies that interfere with construction operations. Provide a licensed arborist or biologist to prepare a relocation plan and oversee the relocation. Relocate affected plants to within undisturbed areas of the Roosevelt Easement or to other areas within the easement after construction, a minimum of **10 feet** away from proposed lighting and electrical features. Provide a 12 month establishment period for all relocated plants. Submit a **Plant Relocation Plan**, indicating existing and proposed locations of plants to be relocated, and include the following:

- a. Method of removal and placement.
- b. Procedures for feeding and watering.
- c. Methods of bracing and for providing physical stability.
- d. Provision for marking so that relocated plants will be identifiable during the establishment period.
- e. Proposed locations of electrical, lighting, and fiber optic features.
- f. Establishment period measures to be employed.

1.13.5.5 Existing Mexican Salvage Yard in Tucson Project 2 and Tire Wall in Tucson Project 1

Coordinate through IBWC and the Contracting Officer prior to fence removals in these areas. The Government will coordinate with Mexican authorities for removal of encroachments, prior to fence removal. Refer to the Encroachment Exhibits attached to the end of this section.

1.13.5.6 Descending Slopes from the IBL into Mexico

Along the wall alignments, there exist steep drop-offs of the existing ground or eroded soil descending into Mexico. These locations will require non-standard foundation designs like deepened footings or tie backs, in order to achieve stability and code compliance.

1.13.5.7 Anti-Tunnel Provision

The minimum **6 foot deep** wall footing may be reduced where existing bedrock of a minimum compressive strength of **3000 psi**, extends continuously from the bottom of footing to minimum **6 feet deep**.

1.13.5.8 Filling of Bollards

Ensure bollards are filled with grout not later than 5 days after bollard panel placement. Use grout with a minimum compressive strength of **3000 psi**. Height of grout fill is as indicated.

1.13.5.9 Gates

1.13.5.9.1 Manually Operated Gates

Provide double-leaf, manually operated, bollard type vehicular swing gates at each International Boundary Monument. Center the gate on the boundary

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PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
40 CFR 112	Oil Pollution Prevention
40 CFR 122.26	Storm Water Discharges (Applicable to State NPDES Programs, see section 123.25)
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 261.7	Residues of Hazardous Waste in Empty Containers
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 262.31	Standards Applicable to Generators of Hazardous Waste-Labeling
40 CFR 263	Standards Applicable to Transporters of Hazardous Waste
40 CFR 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 266	Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities
40 CFR 268	Land Disposal Restrictions
40 CFR 273	Standards For Universal Waste Management
40 CFR 279	Standards for the Management of Used Oil

40 CFR 300	National Oil and Hazardous Substances Pollution Contingency Plan
40 CFR 300.125	National Oil and Hazardous Substances Pollution Contingency Plan - Notification and Communications
40 CFR 355	Emergency Planning and Notification
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards
40 CFR 60	Standards of Performance for New Stationary Sources
40 CFR 63	National Emission Standards for Hazardous Air Pollutants for Source Categories
40 CFR 64	Compliance Assurance Monitoring
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
49 CFR 178	Specifications for Packagings

1.2 DEFINITIONS

1.2.1 Contractor Generated Hazardous Waste

Contractor generated hazardous waste are materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene), waste thinners, excess paints, excess solvents, waste solvents, excess pesticides, and contaminated pesticide equipment rinse water.

1.2.2 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally or historically.

1.2.3 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The

control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.4 Hazardous Debris

As defined in paragraph SOLID WASTE, debris that contains listed hazardous waste (either on the debris surface, or in its interstices, such as pore structure) in accordance with 40 CFR 261. Hazardous debris also includes debris that exhibits a characteristic of hazardous waste in accordance with 40 CFR 261.

1.2.5 Hazardous Materials

Hazardous materials as defined in 49 CFR 171 and listed in 49 CFR 172.

Hazardous material is any material that: Is regulated as a hazardous material in accordance with 49 CFR 173; or requires a Safety Data Sheet (SDS) in accordance with 29 CFR 1910.120; or during end use, treatment, handling, packaging, storage, transportation, or disposal meets or has components that meet or have potential to meet the definition of a hazardous waste as defined by 40 CFR 261 Subparts A, B, C, or D. Designation of a material by this definition, when separately regulated or controlled by other sections or directives, does not eliminate the need for adherence to that hazard-specific guidance which takes precedence over this section for "control" purposes. Such material includes ammunition, weapons, explosive actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical supplies, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos, mercury, and polychlorinated biphenyls (PCBs).

1.2.6 Hazardous Waste

Hazardous Waste is any material that meets the definition of a solid waste and exhibit a hazardous characteristic (ignitability, corrosivity, reactivity, or toxicity) as specified in 40 CFR 261, Subpart C, or contains a listed hazardous waste as identified in 40 CFR 261, Subpart D.

1.2.7 National Pollutant Discharge Elimination System (NPDES)

The NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

1.2.8 Oily Waste

Oily waste are those materials that are, or were, mixed with Petroleum, Oils, and Lubricants (POLs) and have become separated from that POLs. Oily wastes also means materials, including wastewaters, centrifuge solids, filter residues or sludges, bottom sediments, tank bottoms, and sorbents which have come into contact with and have been contaminated by, POLs and may be appropriately tested and discarded in a manner which is in compliance with other state and local requirements.

This definition includes materials such as oily rags, "kitty litter" sorbent clay and organic sorbent material. These materials may be land filled provided that: It is not prohibited in other state regulations or

local ordinances; the amount generated is "de minimus" (a small amount); it is the result of minor leaks or spills resulting from normal process operations; and free-flowing oil has been removed to the practicable extent possible. Large quantities of this material, generated as a result of a major spill or in lieu of proper maintenance of the processing equipment, are a solid waste. As a solid waste, perform a hazardous waste determination prior to disposal. As this can be an expensive process, it is recommended that this type of waste be minimized through good housekeeping practices and employee education.

1.2.9 Regulated Waste

Regulated waste are solid wastes that have specific additional federal, state, or local controls for handling, storage, or disposal.

1.2.10 Sediment

Sediment is soil and other debris that have eroded and have been transported by runoff water or wind.

1.2.11 Solid Waste

Solid waste is a solid, liquid, semi-solid or contained gaseous waste. A solid waste can be a hazardous waste, non-hazardous waste, or non-Resource Conservation and Recovery Act (RCRA) regulated waste. Types of solid waste typically generated at construction sites may include:

1.2.11.1 Debris

Debris is non-hazardous solid material generated during the construction, demolition, or renovation of a structure that exceeds [2.5-inch](#) particle size that is: a manufactured object; plant or animal matter; or natural geologic material (for example, cobbles and boulders), broken or removed concrete, masonry, and rock asphalt paving; ceramics; roofing paper and shingles. Inert materials may be reinforced with or contain ferrous wire, rods, accessories and weldments. A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

1.2.11.2 Green Waste

Green waste is the vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be re-used are not included.

1.2.11.3 Material not regulated as solid waste

Material not regulated as solid waste is nuclear source or byproduct materials regulated under the Federal Atomic Energy Act of 1954 as amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production.

1.2.11.4 Non-Hazardous Waste

Non-hazardous waste is waste that is excluded from, or does not meet, hazardous waste criteria in accordance with [40 CFR 263](#).

1.2.11.5 Recyclables

Recyclables are materials, equipment and assemblies such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and sold as recyclable, and structural components. It also includes commercial-grade refrigeration equipment with Freon removed, household appliances where the basic material content is metal, clean polyethylene terephthalate bottles, cooking oil, used fuel oil, textiles, high-grade paper products and corrugated cardboard, stackable pallets in good condition, clean crating material, and clean rubber/vehicle tires. Metal meeting the definition of lead contaminated or lead based paint contaminated may not be included as recyclable if sold to a scrap metal company. Paint cans that meet the definition of empty containers in accordance with [40 CFR 261.7](#) may be included as recyclable if sold to a scrap metal company.

1.2.11.6 Surplus Soil

Surplus soil is existing soil that is in excess of what is required for this work, including aggregates intended, but not used, for on-site mixing of concrete, mortars, and paving. Contaminated soil meeting the definition of hazardous material or hazardous waste is not included and must be managed in accordance with paragraph HAZARDOUS MATERIAL MANAGEMENT.

1.2.11.7 Scrap Metal

This includes scrap and excess ferrous and non-ferrous metals such as reinforcing steel, structural shapes, pipe, and wire that are recovered or collected and disposed of as scrap. Scrap metal meeting the definition of hazardous material or hazardous waste is not included.

1.2.11.8 Wood

Wood is dimension and non-dimension lumber, plywood, chipboard, hardboard. Treated or painted wood that meets the definition of lead contaminated or lead based contaminated paint is not included. Treated wood includes, but is not limited to, lumber, utility poles, crossties, and other wood products with chemical treatment.

1.2.12 Surface Discharge

Surface discharge means discharge of water into drainage ditches, storm sewers, creeks or "waters of the United States". Surface discharges are discrete, identifiable sources and require a permit from the governing agency. Comply with federal, state, and local laws and regulations.

1.2.13 Wastewater

Wastewater is the used water and solids from a community that flow to a treatment plant.

1.2.13.1 Stormwater

Stormwater is any precipitation in an urban or suburban area that does not

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evaporate or soak into the ground, but instead collects and flows into storm drains, rivers, and streams.

1.2.14 Waters of the United States

Waters of the United States means Federally jurisdictional waters, including wetlands, that are subject to regulation under Section 404 of the Clean Water Act or navigable waters, as defined under the Rivers and Harbors Act.

1.2.15 Wetlands

Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

1.2.16 Universal Waste

The universal waste regulations streamline collection requirements for certain hazardous wastes in the following categories: batteries, pesticides, mercury-containing equipment (for example, thermostats), and lamps (for example, fluorescent bulbs). The rule is designed to reduce hazardous waste in the municipal solid waste (MSW) stream by making it easier for universal waste handlers to collect these items and send them for recycling or proper disposal. These regulations can be found at [40 CFR 273](#).

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section [01 33 00 SUBMITTAL PROCEDURES](#):

SD-01 Preconstruction Submittals

Environmental Protection Plan; G

Stormwater Notice of Intent (for NPDES coverage under the general permit for construction activities); G

Solid Waste Disposal Report; G

Inspection Reports; G

SD-07 Certificates

Letters Of Acceptance

SD-11 Closeout Submittals

Stormwater Pollution Prevention Plan Compliance Notebook; G

Stormwater Notice of Termination (for NPDES coverage under the general permit for construction activities); G

Waste Determination Documentation; G

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

The Government will provide the Contractor with an Environmental Waiver and the Border Patrol (BP) best management practices (BMPs) that will minimize or avoid environmental impacts prior to the issuance of Notice to Proceed. The Environmental Waiver will provide clarification regarding which laws, regulations, and requirements that are waived by the Government for construction of this project. Refer to Appendix C - Environmental Waiver for additional clarification. The Contractor will be responsible for:

- (1) obtaining any necessary permits not covered under the Environmental Waiver and are specifically required herein;
- (2) the development of any plans, such as a Storm Water Pollution Prevention Plan (SWPPP), that are necessary to minimize or avoid environmental impacts; and
- (3) the implementation of BP BMPs and BMPs in general.

During the construction process, adhere to and implement any environmental protection requirements that arise out of such permits or plans and the BMPs that are required by the Government. Compliance with environmental protection requirements and BMPs could impact the overall schedule and completion of the project.

Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Protect the environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire duration of this Contract.

Tests and procedures assessing whether construction operations comply with applicable environmental laws may be required. Analytical work must be performed by qualified laboratories; and where required by law, the laboratories must be certified.

1.4.1 Conformance with Border Patrol's Best Management Practices (BP BMPs)

Perform work under this contract consistent with the policy and objectives identified by the BP BMPs provided in Section 01 11 00 SUMMARY OF WORK; and the requirements herein. Perform work in a manner that conforms to objectives and targets of the environmental programs and operational controls identified by the BP BMPs. Support Government personnel when environmental compliance and BP BMPs inspections are conducted at the Project site, answering questions, and providing proof of records being maintained. Provide monitoring and measurement information as necessary to address environmental performance relative to environmental, energy, and transportation management goals. In the event a BP BMPs nonconformance or environmental noncompliance associated with the contracted services, tasks, or actions occurs, take corrective and preventative actions. In addition, employees must be aware of their roles and responsibilities under the BP BMPs and of how these BP BMPs roles and responsibilities affect work performed under the contract.

Coordinate with the BP environmental coordinator (when necessary) to identify training needs associated with environmental aspects of the project and the BP BMPs, and arrange training or take other action to meet

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these needs. Provide training documentation to the Contracting Officer.

1.5 SPECIAL ENVIRONMENTAL REQUIREMENTS

Comply with the Border Patrol Best Management Practices listed in Section 01 11 00 SUMMARY OF WORK and requirements specified in this section.

1.6 ENVIRONMENTAL PROTECTION PLAN

The purpose of the EPP is to present an overview of known or potential environmental issues that must be considered and addressed during construction. Incorporate construction related objectives and targets from the BP BMPs into the EPP. Include in the EPP measures for protecting natural and cultural resources, required reports, and other measures to be taken. Meet with the Contracting Officer or Contracting Officer Representative to discuss the EPP and develop a mutual understanding relative to the details for environmental protection including measures for protecting natural resources, required reports, and other measures to be taken. Submit the [Environmental Protection Plan](#) within no less than 10 days before the preconstruction meeting. Revise the EPP throughout the project to include any reporting requirements, changes in site conditions, or contract modifications that change the project scope of work in a way that could have an environmental impact. No requirement in this section will relieve the Contractor of any applicable federal, state, and local environmental protection laws and regulations. During Construction, identify, implement, and submit for approval any additional requirements to be included in the EPP. Maintain the current version onsite.

The EPP includes, but is not limited to, the following elements:

1.6.1 General Overview and Purpose

1.6.1.1 Descriptions

A brief description of each specific plan required in this Contract such as stormwater pollution prevention plan or the integration of the EPP, the BP BMPs, and the conditions identified in Appendix D.

1.6.1.2 Duties

The duties and level of authority assigned to the person(s) on the job site overseeing environmental compliance, such as who is responsible for adherence to the EPP, who is responsible for spill cleanup and training personnel on spill response procedures, who is responsible for manifesting hazardous waste to be removed from the site (if applicable), and who is responsible for training the Contractor's environmental protection personnel.

1.6.1.3 Procedures

A copy of any standard or project-specific operating procedures that will be used to effectively manage and protect the environment on the project site.

1.6.1.4 Communications

Communication and training procedures that will be used to convey environmental management requirements to Contractor employees and subcontractors.

1.6.1.5 Contact Information

Emergency contact information contact information (office phone number, cell phone number, and e-mail address).

1.6.2 General Site Information

1.6.2.1 Drawings

Include drawings showing locations of proposed temporary excavations or embankments for haul roads, stream and arroyo crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess soil.

1.6.2.2 Work Area

Include a work area plan showing the proposed activity in each portion of the area and identify the areas of limited use or nonuse. Include measures for marking the limits of use areas, including methods for protection of features to be preserved within authorized work areas and methods to control runoff and to contain materials on site, and a traffic control plan.

1.6.2.3 Documentation

Include a letter signed by an officer of the firm appointing the Environmental Manager and stating that person is responsible for managing and implementing the Environmental Program as described in this contract. Include in this letter the Environmental Manager's authority to direct the removal and replacement of non-conforming work.

1.6.3 Management of Natural Resources

Include the following as applicable:

- a. Land resources
- b. Temporary construction
- c. Stream crossings
- d. Fish and wildlife resources

1.6.4 Protection of Historical and Archaeological Resources

Include the following as applicable:

- a. Objectives
- b. Methods

1.6.5 Stormwater Management and Control

Include the following as applicable:

- a. Ground cover
- b. Erodible soils
- c. Temporary measures

(1) Structural Practices

(2) Temporary and permanent stabilization

d. Effective selection, implementation and maintenance of Best Management Practices (BMPs) and Border Patrol's BMPs.

1.6.6 Protection of the Environment from Waste Derived from Contractor Operations

Describe control and disposal of solid and sanitary waste and hazardous waste.

This item consist of the management procedures for hazardous waste to be generated. As a minimum, include the following:

- a. List of the types of hazardous wastes expected to be generated
- b. Procedures to ensure a written waste determination is made for appropriate wastes that are to be generated
- c. Sampling/analysis plan, including laboratory method(s) that will be used for waste determinations and copies of relevant laboratory certifications
- d. Methods and proposed locations for hazardous waste accumulation/storage (that is, in tanks or containers)
- e. Management procedures for storage, labeling, transportation, and disposal of waste (treatment of waste is not allowed unless specifically noted)
- f. Management procedures and regulatory documentation ensuring disposal of hazardous waste complies with Land Disposal Restrictions ([40 CFR 268](#))
- g. Management procedures for recyclable hazardous materials such as lead-acid batteries, used oil, and similar
- h. Used oil management procedures in accordance with [40 CFR 279](#); Hazardous waste minimization procedures
- i. Plans for the disposal of hazardous waste by permitted facilities; and Procedures to be employed to ensure required employee training records are maintained.

1.6.7 Prevention of Releases to the Environment

Include procedures to prevent releases to the environment and provide notifications in the event of a release to the environment.

1.6.8 Clean Air Act Compliance

1.6.8.1 Haul Route

As a part of the Offsite Haul Routes Plan submitted in accordance with the Section [01 50 00](#) TEMPORARY FACILITIES AND CONTROLS, include provisions for controlling dirt, debris, and dust on public or private roadways. As a minimum, identify in the plan the subcontractor and equipment for cleaning

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along the haul route and measures to reduce dirt, dust, and debris from roadways.

1.6.8.2 Pollution Generating Equipment

Identify air pollution generating equipment or processes that may require federal, state, or local permits under the Clean Air Act. Determine requirements based on any current permits and the impacts of the project. Provide a list of all fixed or mobile equipment, machinery or operations that could generate air emissions during the project to the Contracting Officer.

1.6.8.3 Stationary Internal Combustion Engines

Identify portable and stationary internal combustion engines that will be supplied, used or serviced. Comply with 40 CFR 60 Subpart IIII, 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ, and local regulations as applicable. At minimum, include the make, model, serial number, manufacture date, size (engine brake horsepower), and EPA emission certification status of each engine. Maintain applicable records and log hours of operation and fuel use. Logs must include reasons for operation and delineate between emergency and non-emergency operation.

1.6.8.4 Air Pollution-Generating Processes

Identify planned air pollution-Generating processes and management control measures (including, but not limited to, spray painting, abrasive blasting, demolition, material handling, fugitive dust, and fugitive emissions). Log hours of operations and track quantities of materials used.

1.6.8.5 Compliant Materials

Provide the Government a list of and SDSs for all hazardous materials proposed for use on site. Materials must be compliant with all Clean Air Act regulations for emissions including solvent and volatile organic compound contents, and applicable National Emission Standards for Hazardous Air Pollutants requirements. The Government may alter or limit use of specific materials as needed to best accomodate requirements for emissions.

1.7 ENVIRONMENTAL RECORDS BINDER

Maintain on-site a separate three-ring Environmental Records Binder and submit at the completion of the project. Make separate parts within the binder that correspond to each submittal listed under paragraph CLOSEOUT SUBMITTALS in this section.

1.8 SOLID WASTE MANAGEMENT

Provide the Contracting Officer with written notification of the quantity of anticipated solid waste or debris that is anticipated or estimated to be generated by construction. Include in the report the locations where various types of waste will be disposed or recycled. Include letters of acceptance from the receiving location or as applicable; **submit one copy of the Letters of Acceptance.**

1.8.1 Solid Waste Disposal Report

Monthly, submit a **Solid Waste Disposal Report** to the Contracting Officer. For each waste, the report will state the classification (using the

definitions provided in this section), amount, location, and name of the business receiving the solid waste.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants, including their habitats. Prior to the commencement of activities, consult with the Border Patrol (and potentially the state fish and game department), regarding rare species or sensitive habitats that need to be protected. The protection of rare, threatened, and endangered animal and plant species identified, including their habitats, is the Contractor's responsibility.

Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work that is consistent with the requirements of the Border Patrol or as otherwise specified herein. Confine construction activities to within the limits of the work indicated or specified.

3.1.1 Flow Ways

Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the project and critical to the survival of wildlife, except as specified and permitted.

3.1.2 Vegetation

Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer. Where such use of attached ropes, cables, or guys is authorized, the Contractor is responsible for any resultant damage.

Protect existing trees that are to remain to ensure they are not injured, bruised, defaced, or otherwise damaged by construction operations. Remove displaced rocks from uncleared areas. Coordinate with the Contracting Officer to determine appropriate action for trees and other landscape features scarred or damaged by equipment operations.

3.1.3 Streams

Stream crossings must allow movement of materials or equipment without intentionally violating water pollution control standards of the federal, state, and local governments.

The Contracting Officer's approval is required before any equipment will be permitted to ford live streams. In areas where frequent crossings are required, install temporary culverts or bridges. Obtain Contracting Officer's approval prior to installation of any of these measures. Remove temporary culverts or bridges upon completion of work, and repair the area to its original condition unless otherwise required by the Contracting

Officer.

3.2 STORMWATER

Do not discharge stormwater from construction sites to sanitary sewers. If the water is noted or suspected of being contaminated, it may only be released as directed by the Contracting Officer. Obtain authorization in advance from the Contracting Officer for any release of contaminated water.

3.2.1 Construction General Permit

Provide a Construction General Permit as required by EPA General Permit. Under the terms and conditions of the permit, install, inspect, maintain BMPs, prepare stormwater erosion and sediment control inspection reports, and submit SWPPP inspection reports. Maintain construction operations and management in compliance with the terms and conditions of the general permit for stormwater discharges from construction activities.

3.2.1.1 Arizona

3.2.1.1.1 Regulatory Requirements for the Notice of Intent (NOI)

Submit a vicinity map and a NOI to the Arizona Department of Environmental Quality (ADEQ). If discharges to a unique or impaired water body are proposed, submit the SWPPP along with the NOI. See the General Permit for instructions. Submit Notice of Termination (NOT) to ADEQ within 30 days after permit conditions have been met.

Arizona Pollutant Discharge Elimination System General Permit for Dischargers from Construction Activities to Water of the United States 2008, Permit No. AZG2013-001 expires June 2, 2018

http://www.azdeq.gov/environ/water/permits/download/2013_cgp.pdf

3.2.1.2 Stormwater Pollution Prevention Plan

Submit a project-specific Stormwater Pollution Prevention Plan (SWPPP) to the Contracting Officer for approval, prior to the commencement of work. The SWPPP must meet the requirements of [40 CFR 122.26](#) and the EPA General Permit for stormwater discharges from construction sites.

Include the following:

- a. Comply with terms of the EPA general permit for stormwater discharges from construction activities. Prepare SWPPP in accordance with EPA requirements. Use EPA guide Developing your Stormwater Pollution Prevention Plan located at

<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Pollution-Prevention-Plans-for-Construction-Activities.cfm>

to prepare the SWPPP.

- b. Select applicable BMPs from EPA Fact Sheets located at

<http://water.epa.gov/polwaste/npdes/swbmp/Construction-Site-StormWater-Run-Off-Control.cfm>

or in accordance with applicable state or local requirements.

c. Include a completed copy of the Notice of Intent, BMP Inspection Report Template, and Stormwater Notice of Termination, except for the effective date.

3.2.1.3 Stormwater Notice of Intent for Construction Activities

Prepare and submit the [Stormwater Notice of Intent](#) for NPDES coverage under the general permit for construction activities to the Contracting Officer for review.

Submit the NOI and appropriate permit fees onto the appropriate federal agency. Maintain a copy of the SWPPP at the onsite construction office, and continually update as required, reflecting current site conditions.

3.2.1.4 Inspection Reports

Submit [Inspection Reports](#) to the Contracting Officer in accordance with EPA Construction General Permit.

3.2.1.5 [Stormwater Pollution Prevention Plan Compliance Notebook](#)

Create and maintain a three ring binder of documents that demonstrate compliance with the Construction General Permit. Include a copy of the permit Notice of Intent, proof of permit fee payment, SWPPP and SWPPP update amendments, inspection reports and related corrective action records, copies of correspondence with the EPA, and a copy of the permit Notice of Termination in the binder. At project completion, the notebook becomes property of the Government. Provide the compliance notebook to the Contracting Officer.

3.2.1.6 Stormwater Notice of Termination for Construction Activities

Submit a [Stormwater Notice of Termination](#) to the Contracting Officer once construction is complete and final stabilization has been achieved on all portions of the site for which the permittee is responsible. Once approved, submit the Notice of Termination to the appropriate federal agency.

3.2.2 Erosion and Sediment Control Measures

Provide erosion and sediment control measures in accordance with state and local laws and regulations and the BP BMPs. Preserve vegetation to the maximum extent practicable.

Erosion control inspection reports may be compiled as part of a stormwater pollution prevention plan inspection reports.

3.2.3 Work Area Limits

Mark the areas that need not be disturbed under this Contract prior to commencing construction activities. Mark or fence isolated areas within the general work area that are not to be disturbed. Protect monuments and markers before construction operations commence. Where construction operations are to be conducted during darkness, any markers must be visible in the dark. Personnel must be knowledgeable of the purpose for marking and protecting particular objects.

3.2.4 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas directed by the Contracting Officer. Move or relocate the Contractor facilities only when approved by the Government. Provide erosion and sediment controls for onsite borrow and spoil areas to prevent sediment from entering nearby waters. Control temporary excavation and embankments for plant or work areas to protect adjacent areas.

3.3 SURFACE AND GROUNDWATER

3.3.1 Cofferdams, Diversions, and Dewatering

Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure must be constantly controlled. Do not discharge excavation ground water to the sanitary sewer, storm drains, or to surface waters without prior specific authorization in writing. Discharge of hazardous substances will not be permitted under any circumstances. Use sediment control BMPs to prevent construction site runoff from directly entering any storm drain or surface waters.

If the construction dewatering is noted or suspected of being contaminated, it may only be released to the storm drain system if the discharge is specifically permitted. Obtain authorization for any contaminated groundwater release in advance from the Border Patrol. Discharge of hazardous substances will not be permitted under any circumstances.

3.3.2 Waters of the United States

Do not enter, disturb, destroy, or allow discharge of contaminants into waters of the United States.

3.4 PROTECTION OF CULTURAL RESOURCES

3.4.1 Archaeological Resources

If, during excavation or other construction activities, any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, activities that may damage or alter such resources will be suspended. Resources covered by this paragraph include, but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, fence, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, immediately notify the Contracting Officer and Border Patrol so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. Cease all activities that may result in impact to or the destruction of these resources. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources. The Government retains ownership and control over archaeological resources. Archeological investigations, including on-site monitoring of construction, must be supervised by an archeologist (PI, PA) who meets the U.S. Secretary of the Interior's Professional Qualification Standards for Archeology (48 FR 22716 or 36 CFR Part 61).

3.5 AIR RESOURCES

Equipment operation, activities, or processes will be in accordance with

40 CFR 64.

3.5.1 Preconstruction Air Permits

Notify the Contracting Officer prior to bringing equipment, assembled or unassembled, onto the jobsite.

3.5.2 Burning

Burning is prohibited on the Government premises.

3.5.3 Dust Control

Keep dust down at all times, including during nonworking periods. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning nonparticulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not unnecessarily shake bags of cement, concrete mortar, or plaster.

3.5.3.1 Particulates

Dust particles, aerosols and gaseous by-products from construction activities, and processing and preparation of materials (such as from asphaltic batch plants) must be controlled at all times, including weekends, holidays, and hours when work is not in progress. Maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates that would exceed 40 CFR 50, or that would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators, or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a particulate nuisance or hazard occurs. Comply with visibility requirements provided by the Contracting Officer.

3.6 WASTE MINIMIZATION

Minimize the use of hazardous materials and the generation of waste. Include procedures for pollution prevention/ hazardous waste minimization in the EPP. Describe the anticipated types of the hazardous materials to be used in the construction when requesting information.

3.6.1 Salvage, Reuse and Recycle

Identify anticipated materials and waste for salvage, reuse, and recycling. Describe actions to promote material reuse, resale or recycling. To the extent practicable, all scrap metal must be sent for reuse or recycling and will not be disposed of in a landfill.

Include the name, physical address, and telephone number of the hauler, if transported by a franchised solid waste hauler. Include the destination and, unless exempted, provide a copy of the state or local permit (cover) or license for recycling.

3.7 BORROW SOURCE SOILS

All borrow soils must comply with the requirements herein and as follows:

3.7.1 Requirements for Offsite Soils from Non-Commercial Borrow Sources

Offsite soils from non-commercial borrow sites must be certified for use in one of the following ways:

- a. Conduct a Phase 1 Environmental Site Assessment (ESA) in accordance with ASTM 1527-05 or 2247-08 (depending on the locality of the borrow area) on the borrow area to prove that the borrow area has had no impact from industrial, chemical or waste disposal activities.
- b. Test the borrow soils for Total Petroleum Hydrocarbons (TPH EPA Method 418.1), Semi Volatile Organics (EPA Method 8270D), Volatile Organics (EPA Method 8260B), Pesticides (EPA Method 8081A), Herbicides (EPA Method 8151A), Polychlorinated Biphenyls (PCB EPA Method 8082) and the Priority Pollutant Metals (EPA Method 245.1). Representative discrete samples must be of actual borrow material to be used for project, be collected at the borrow area while the potential fill material is still in place, and analyzed prior to removal from the borrow area. Conduct testing and sampling no more than 6 months prior to the use of the borrow soil. Composite sampling for fill material is not appropriate as losses of volatile and semi-volatile analytes can occur. The number of samples required must be in accordance with the following Sampling Frequency Table.

Area of Individual Borrow Area	Sampling Requirements
2 Acres or Less	Minimum of 4 Discrete Samples
2 to 4 Acres	Minimum of 1 Discrete Sample Every Acre
4 to 10 Acres	Minimum of 8 Discrete Samples
Greater than 10 Acres	Minimum of 8 Discrete Samples with 4 Subsamples per Location
Volume of Borrow Area Stockpile	Samples per Volume
Up to 1,000 Cubic Yards (~ 1,500 Tons)	1 Sample/250 Cubic Yards (~375 Tons)
1,000 to 5,000 Cubic Yards	4 Samples for first 1000 Cubic Yards + 1 Sample per each additional 500 CY
Greater than 5,000 Cubic Yards	12 Samples for First 5,000 CY + 1 Sample for Each Additional 1,000 CY

Provide the results of the Borrow Area Phase 1 ESA and/or analytical soil testing to the Contracting Officer and Environmental Engineering within 10 calendar days of conclusion of Phase 1 ESA/results or analytical testing. Provide the analytical results as a standard laboratory data package, including a summary of the Quality Assurance/Quality Control (QA/QC) sample results. The sample results must accompany all analytical reports.

Do not transport offsite non-commercial borrow material onsite until the use of this material has been approved by the Contracting Officer.

3.7.2 Requirements for Off-Site Soils from Commercial Borrow Sources

Provide certification from the commercial borrow source that the borrow material is free of all contamination. Do not transport any off-site commercial borrow material until the use of this material is approved by the Contracting Officer.

3.7.3 Soils from a Non-Commercial Borrow Source

Obtain approval from the Contracting Officer before any onsite soils are used for project construction purposes. Any onsite soils used must meet the geotechnical requirements as specified in the Contractor's specification section for Earthwork and the provisions of paragraph REQUIREMENTS FOR OFF-SITE SOILS FROM NON-COMMERCIAL BORROW SOURCES.

3.8 WASTE MANAGEMENT AND DISPOSAL

3.8.1 Waste Determination Documentation

Complete a Waste Determination form (provided at the preconstruction conference) for Contractor-derived wastes to be generated. All potentially hazardous solid waste streams that are not subject to a specific exclusion or exemption from the hazardous waste regulations (e.g. scrap metal, domestic sewage) or subject to special rules, (lead-acid batteries and precious metals) must be characterized in accordance with the requirements of 40 CFR 261. Base waste determination on user knowledge of the processes and materials used, and analytical data when necessary. Attach support documentation to the Waste Determination form. As a minimum, provide a Waste Determination form for the following waste (this listing is not inclusive): oil- and latex-based painting and caulking products, solvents, adhesives, aerosols, petroleum products, and containers of the original materials.

3.8.2 Control and Management of Hazardous Waste

Do not dispose of hazardous waste on Government property. Do not discharge any waste to a sanitary sewer, storm drain, or to surface waters or conduct waste treatment or disposal on Government property without written approval of the Contracting Officer.

3.8.2.1 Hazardous Waste/Debris Management

Identify construction activities that will generate hazardous waste or debris. Provide a documented waste determination for resultant waste streams. Identify, label, handle, store, and dispose of hazardous waste or debris in accordance with 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, and 40 CFR 268.

Manage hazardous waste in accordance with the EPP. Store hazardous wastes in approved containers in accordance with 49 CFR 173 and 49 CFR 178. Hazardous waste generated within the confines of Government facilities is identified as being generated by the Government. Prior to removal of any hazardous waste from Government property, hazardous waste manifests must be signed by the Contracting Officer. Do not bring hazardous waste onto Government property. Provide the Contracting Officer with a copy of waste determination documentation for any solid waste streams that have any potential to be hazardous waste or contain any chemical constituents listed in 40 CFR 372-SUBPART D.

3.8.2.2 Hazardous Waste Disposal

3.8.2.2.1 Responsibilities for Contractor's Disposal

Provide hazardous waste manifest to the Contracting Officer for review, approval, and signature prior to shipping waste off Government property.

3.8.2.2.1.1 Services

Provide service necessary for the final treatment or disposal of the hazardous material or waste in accordance with [40 CFR 260](#), local, and state, laws and regulations, and the terms and conditions of the Contract within 60 days after the materials have been generated. These services include necessary personnel, labor, transportation, packaging, detailed analysis (if required for disposal or transportation, include manifesting or complete waste profile sheets, equipment, and compile documentation).

3.8.2.2.1.2 Samples

Obtain a representative sample of the material generated for each job done to provide waste stream determination.

3.8.2.2.1.3 Analysis

Analyze each sample taken and provide analytical results to the Contracting Officer. See paragraph WASTE DETERMINATION DOCUMENTATION.

3.8.2.2.1.4 Labeling

Determine the Department of Transportation's (DOT's) proper shipping names for waste (each container requiring disposal) and demonstrate to the Contracting Officer how this determination is developed and supported by the sampling and analysis requirements contained herein. Label all containers of hazardous waste with the words "Hazardous Waste" or other words to describe the contents of the container in accordance with [40 CFR 262.31](#) and applicable state or local regulations.

3.8.3 Releases/Spills of Oil and Hazardous Substances

3.8.3.1 Response and Notifications

Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated in accordance with [40 CFR 300](#). Maintain spill cleanup equipment and materials at the work site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release. In the event of any releases of oil and hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify the Contracting Officer and facility owner (International Boundary and Water Commission) in addition to the National Response Center.

Submit verbal and written notifications as required by the federal ([40 CFR 300.125](#) and [40 CFR 355](#)), state, local regulations and instructions. Provide copies of the written notification and documentation that a verbal notification was made within 20 days. Spill response must be in accordance with [40 CFR 300](#) and applicable state and local regulations. Contain and clean up these spills without cost to the Government.

3.8.3.2 Clean Up

Clean up hazardous and non-hazardous waste spills. Reimburse the Government for costs incurred including sample analysis materials, clothing, equipment, and labor if the Government will initiate its own spill cleanup procedures, for Contractor-responsible spills, when: Spill cleanup procedures have not begun within one hour of spill discovery/occurrence; or, in the Government's judgment, spill cleanup is inadequate and the spill remains a threat to human health or the environment.

3.9 HAZARDOUS MATERIAL MANAGEMENT

Include hazardous material control procedures in the Safety Plan, in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS. Address procedures and proper handling of hazardous materials, including the appropriate transportation requirements. Do not bring hazardous material onto Government property that does not directly relate to requirements for the performance of this contract. Submit an SDS and estimated quantities to be used for each hazardous material to the Contracting Officer prior to bringing the material on the jobsite. Typical materials requiring SDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. Use hazardous materials in a manner that minimizes the amount of hazardous waste generated. Containers of hazardous materials must have National Fire Protection Association labels or their equivalent. Certify that hazardous materials removed from the site are hazardous materials and do not meet the definition of hazardous waste, in accordance with 40 CFR 261.

3.10 PREVIOUSLY USED EQUIPMENT

Clean previously used construction equipment prior to bringing it onto the project site. Equipment must be free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the U.S. Department of Agriculture jurisdictional office for additional cleaning requirements.

3.11 PETROLEUM, OIL, LUBRICANT (POL) STORAGE AND FUELING

POL products include flammable or combustible liquids, such as gasoline, diesel, lubricating oil, used engine oil, hydraulic oil, mineral oil, and cooking oil. Store POL products and fuel equipment and motor vehicles in a manner that affords the maximum protection against spills into the environment. Manage and store POL products in accordance with EPA 40 CFR 112, and other federal laws and regulations. Use secondary containments, dikes, curbs, and other barriers, to prevent POL products from spilling and entering the ground, storm or sewer drains, stormwater ditches or canals, or navigable waters of the United States. Describe in the EPP (see paragraph ENVIRONMENTAL PROTECTION PLAN) how POL tanks and containers must be stored, managed, and inspected and what protections must be provided.

3.11.1 Used Oil Management

Manage used oil generated on site in accordance with 40 CFR 279. Determine if any used oil generated while onsite exhibits a characteristic of hazardous waste. Used oil containing 1,000 parts per million of solvents is considered a hazardous waste and disposed of at the Contractor's

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expense. Used oil mixed with a hazardous waste is also considered a hazardous waste. Dispose in accordance with paragraph HAZARDOUS WASTE DISPOSAL.

3.11.2 Oil Storage Including Fuel Tanks

Provide secondary containment and overfill protection for oil storage tanks. A berm used to provide secondary containment must be of sufficient size and strength to contain the contents of the tanks plus 5 inches freeboard for precipitation. Construct the berm to be impervious to oil for 72 hours that no discharge will permeate, drain, infiltrate, or otherwise escape before cleanup occurs. Use drip pans during oil transfer operations; adequate absorbent material must be onsite to clean up any spills and prevent releases to the environment. Cover tanks and drip pans during inclement weather. Provide procedures and equipment to prevent overfilling of tanks. If tanks and containers with an aggregate aboveground capacity greater than 1320 gallons will be used onsite (only containers with a capacity of 55 gallons or greater are counted), provide and implement a SPCC plan meeting the requirements of 40 CFR 112. Do not bring underground storage tanks to the project site for Contractor use during a project. Submit the SPCC plan to the Contracting Officer for approval.

Monitor and remove any rainwater that accumulates in open containment dikes or berms. Inspect the accumulated rainwater prior to draining from a containment dike to the environment, to determine there is no oil sheen present.

3.12 INADVERTENT DISCOVERY OF PETROLEUM-CONTAMINATED SOIL OR HAZARDOUS WASTES

If petroleum-contaminated soil, or suspected hazardous waste is found during construction that was not identified in the Contract documents, immediately notify the Contracting Officer. Do not disturb this material until authorized by the Contracting Officer.

3.13 SOUND INTRUSION

Make the maximum use of low-noise emission products, as certified by the EPA. Blasting or use of explosives are not permitted without written permission from the Contracting Officer, and then only during the designated times. Confine pile-driving operations to the period between 8 a.m. and 5 p.m., Monday through Friday, exclusive of holidays, unless otherwise specified.

Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the State in which work is being conducted.

3.14 POST CONSTRUCTION CLEANUP

Clean up areas used for construction in accordance with Contract Clause:

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"Cleaning Up". Unless otherwise instructed in writing by the Contracting Officer, remove traces of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. Grade parking area and similar temporarily used areas to conform with surrounding contours.

-- End of Section --